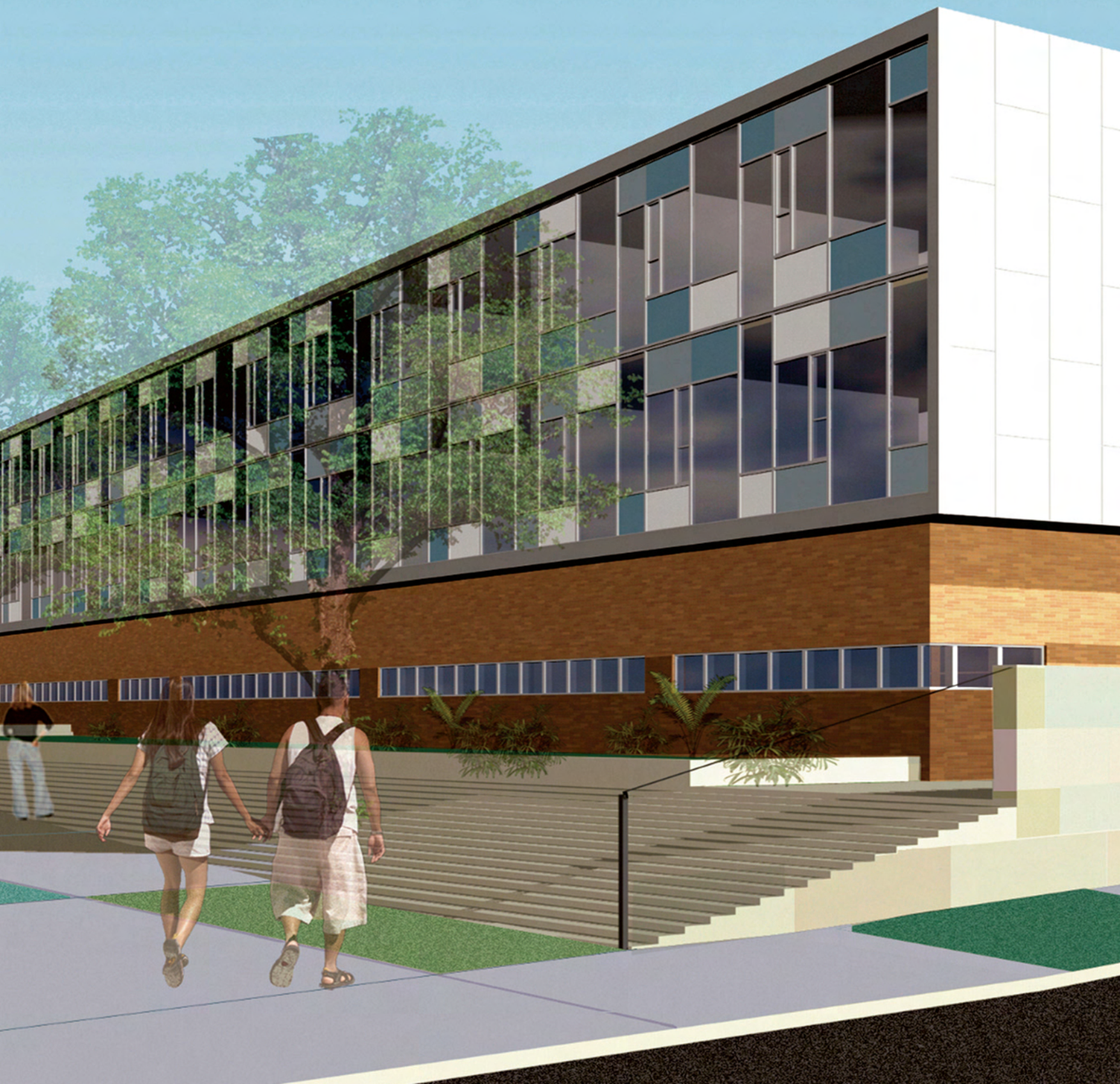


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TexasArchitect

January/February 2007

Volume 57, Number 1

The Official Publication of the Texas Society of Architects

Texas Architect (ISSN: 0040-4179) is published six times per year (bimonthly) by the Texas Society of Architects (TSA), 816 Congress Ave., Suite 970, Austin, Texas 78701. TSA is the Texas component of the American Institute of Architects (AIA). Copyright 2007 by TSA.

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Periodicals postage paid at Austin, TX, and additional mailing offices. POSTMASTER: Send address changes to *Texas Architect*, 816 Congress Ave., Suite 970, Austin, Texas 78701-2443. Phone: (512) 478-7386. Printed in the U.S.A.

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A Teacher's Gift

While working on PVAM's architecture school, the designer taught lessons about the process

EVEN the best spaces for learning can't substitute for good teaching, an intangible but absolutely essential component that if missing renders architecture an almost pointless exercise. Gifted teachers bring purpose to the architect's design, and thoughtful design, like inspired teaching, can instill a sense of wonder in young minds. To excel in both the art of design and the art of teaching takes a rare blend of intuition, discipline, and compassion.

According to the dean of architecture at Prairie View A&M, those exceptional qualities describe Michael Rotondi, FAIA, whose design for the university's School of Architecture has transformed the way PVAM's students approach their education. The new building opened for the Fall 2005 semester (and was featured in last year's Jan/Feb *Texas Architect*). As the design phase unfurled, Rotondi traveled from Los Angeles every two weeks to critique a design studio. "His presence on campus seemed to raise the standard for design studio excellence," the dean, Dr. Ikhlas Sabouni, said recently.

In his initial interviews with faculty and students prior to gaining the commission, Sabouni recalled, Rotondi displayed an innate ability to teach. Although the faculty knew Rotondi's background as the former director of SCI-Arc and a co-founding partner of Morphosis, Sabouni said, his gifts were revealed in his interactions with the students. Rotondi was competing with other renowned architects for the job, and each visited the campus to discuss their personal theories of design, show examples of their work, and offer their thoughts on potential directions they might take. In response to questions from students about what type of environment he would want if he were a student at Prairie View, Rotondi suggested creating a "canyon" within the building's main volume. That notion appealed to the students, Sabouni said, as did his idea for peeling away sections of the building's brick facade to stream daylight into the interior spaces. "Rotondi seemed also most like a teacher to them," she said. "His presentations were always informative, as if he were teaching them as well as designing."

After Rotondi was hired and began his regular treks to Prairie View, Sabouni said, the design process proved to be especially instructive for the students. "Rotondi's office created study models to show the client and the students," she said. "It was like the teacher was, for a while, the student, having to show his work before people who not only were going to grade him, but pay him! Students could see, possibly for the first time, how the function of money comes into play in the real world. If you don't do well, you don't just get an F—you don't get paid."

Rotondi's lessons linger, Sabouni said: "After living and working in the building for a year and a half, after the creative process is complete, after the drawings are filed away, the teaching and learning continues. Students tell me every day that they are still discovering things about the building that make them wonder and think. As they walk the 'canyon,' the building teaches them about materials, structure, and order. The daring of the design challenges them and raises the bar for students—future architects."

* * *

Each year when the AIA's Committee on Architecture for Education announces its CAE Design Awards, an important window opens onto a specialized area of practice. Designers of spaces for learning can't afford to overlook the lessons imparted by the jury.

While no 2006 CAE honors went to Texas projects, the state was represented on the jury by Greg Papay, AIA, of Lake/Flato Architects in San Antonio. Papay and the other jurors noted five trends that were manifest in many of the award program's 85 entries. Those noteworthy trends were 1) a growing focus on creating sustainable solutions; 2) effective incorporation of daylighting; 3) simple forms used in interesting ways to create stronger design solutions; 4) increasing use of nontraditional materials (such as corrugated metal, concrete, steel, fiberglass panels, stucco, and wood) on the building envelope; and 5) more prevalent use of color in both the interiors and exterior. Hardly revelatory, most are familiar to anyone even only slightly interested in school design.



Rotondi's design encourages collaboration among Prairie View's students; photo by Paul Hester.

Interviewed recently, Papay recalled that prevalent use of color was conspicuous on several entries. However, he noted that the jury did not select any of those projects for awards, implying that the jury needed to be convinced that color was not used gratuitously. The trend towards simple forms, especially in large projects, was seen as similarly problematic, he said.

The most resonate projects for the jury, Papay said, were those that demonstrated adept handling of a tight budget. "The better projects exhibited a clever, purposeful use of resources, creating usable spaces that were innovative because they were seeking to create better environments for education," he said. "They understood that at a conceptual level, economic resources that go to architecture need to be used just as responsibly as economic resources used to support scholarships, increase teacher salaries, buy equipment, support programs, etc."

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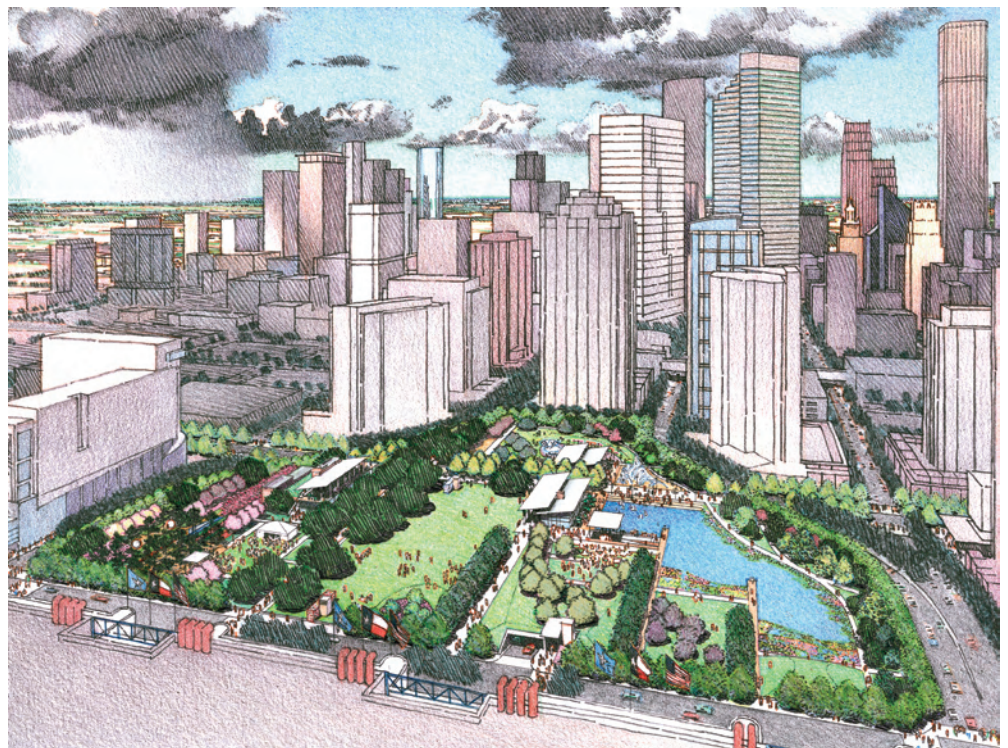
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Work Begins on 'Discovery Green' at Prime Downtown Houston Site

H O U S T O N Downtown Houston will soon have a new 11.78-acre park stretching across three blocks directly in front of the George R. Brown Convention Center. Currently under construction, the park takes the place of two underused parking lots and a block of green space sandwiched in between. Designed as a multi-functional outdoor space and expected to cost \$93 million to build, the new park promises to be an unexpected retreat within walking distance of the convention center, nearby hotels, and adjacent venues for professional sports.

"Discovery Green" is scheduled for completion in early 2008, although a portion of the park is expected to open as early as this November. The site consists of an 8.93-acre "superblock" (a combination of three enlarged urban blocks) and a 1.82-acre tract across Crawford Street. Closure of Crawford Street will add another acre to the park's footprint. The site is bracketed by the convention center and the Hilton Americas, with Minute Maid Park, the Toyota Center, and the downtown skyline visible nearby.

The project was initiated in 2004 by Houston Mayor Bill White with the help of the Houston Downtown Park Conservatory, a group of local foundations, philanthropists, and civic officials. The vision was to build a dynamic urban park through public input and participation. Public interest in the project resulted in the naming of the park "Discovery Green." Project for Public



Shown from the vantage point of the roof of the George R. Brown Convention Center, the future downtown park will stretch across three blocks to offer abundant green space. 'Discovery Green' is expected to be completed in early 2008.

Spaces facilitated a community process to develop both the vision and a program for the park, with the idea that the park would become Houston's "backyard." The process revealed a number of elements that were integrated into the concept for the park, including the creation of multi-functional spaces, preservation of existing landscape features, and incorporation of family-friendly design.

Amenities include an "interactive" fountain, a one-acre pond for model boats, a "great lawn," a pedestrian trail, a playground, two restaurants, an amphitheater, and picnic areas. "Discovery Green will be a premier urban park—on par with many other great urban parks found in the world's leading cities," said Mayor White during a ground-breaking ceremony on Oct. 17.

"It is one of many vibrant projects that have and will change the landscape of downtown Houston."

At the same event where local dignitaries symbolically began the construction phase, the official name of the park was announced. The Conservancy held a contest to name the park that culminated in "Discovery Green" being chosen from more than 6,000 entries.

Work on the park will coincide with the construction of a 630-car underground parking garage below the site. The garage will serve the convention center and the park, as well as other public parking needs in the area. The facility is expected to offset the loss of the two surface lots that will be demolished.

Hargreaves Associates is providing landscape architecture and design for the multi-use park, with the Houston office of Page Southerland Page consulting on architecture and Lauren Griffith Associates providing local landscape expertise. In addition, a large team of local engineers and specialists are providing architecture, interiors, and MEP engineering for the park administration building, two restaurants and the underground parking garage.

ANDREA EXTER

The writer is associate publisher of *Texas Architect*.



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Symposium in March at A&M Examines Conservation of Texas' WWII Heritage

COLLEGE STATION From out of the crucible of violence and heroism known as World War II arose what some call “the greatest generation.” For the soldiers who fought its battles and the civilians who endured its hardships, the effects of that cataclysmic event continue to resonate more than 60 years later. And much like those who experienced the war first-hand, time slowly but inexorably undermines the physical remnants of that global conflict.

In March, Texas A&M University's Center for Heritage Conservation will sponsor a symposium dedicated to the examination of places that connected Texas to WWII. Among those sites are a former U.S. Army Air Corps base in Bryan, a detention camp for German prisoners of war in Hearne, and the USS Texas deployed in the D-Day landings.

Underscoring the interest in preserving the heritage of Texas in the Second World War are five major programs currently underway by the Texas Historical Commission. Those include a multi-year survey of places significant to WWII-era military and home-front activities, a series of historical markers to commemorate previously unrecognized WWII sites, and special publications. In addition, the Texas Department of Transportation is undertaking a comprehensive survey of the many general aviation facilities used as WWII training installations around the state.

The interest of Texas A&M's Center for Heritage Conservation was driven in part by the residual effects of WWII on Dr. Richard Burt, a College of Architecture faculty member from Great Britain. He grew up surrounded by veteran soldiers — his father and his father's friends — who rarely spoke of their wartime experiences, but whose lives had been altered by D-Day, the Desert Rats' campaigns in North Africa, and POW camps in Japan. Burt's passion for preserving this element of his own history reached a fateful juncture when he arrived in College Station and learned that James Earl Rudder, the university's president at that time, was a hero of the Normandy landing in 1944.

The courage of Lt. Col. Rudder and his Army Rangers on June 6, 1944 has been the subject of documentaries and films. Their heroic scaling of Pointe du Hoc to destroy Nazi guns that commanded the Utah and Omaha beaches belies description, and the site, now in the guardian-



COURTESY CENTER FOR HERITAGE CONSERVATION

At Pointe du Hoc in Normandy, France, teams from the Center for Heritage Conservation at Texas A&M University have been recording and analyzing the battle-scarred remains of the site of one of D-Day's most heroic assaults. Among their findings at Gun Emplacement Number One was evidence of allied shelling and bombing in the days before June 6, 1944. The site is among the topics set for a symposium on the A&M campus scheduled March 2-3.

ship of the American Battle Monuments Commission, is a much-visited shrine to those who lost their lives in the successful assault. Rudder's men found themselves in a veritable moonscape of craters left by days of bombing and shelling, some of the latter being from the USS Texas whose guns fired round after round of 14-inch shells. [Now berthed as a floating museum at the San Jacinto State Historic Site near Houston, the mammoth WWI-era dreadnought represents another piece of wartime heritage threatened by decay.]

Scheduled on March 2-3, the CHC symposium will feature speakers to address aspects of their work with WWII heritage. For the past three years the Center itself has been undertaking studies of the Pointe du Hoc site in Normandy to establish a definitive physical evaluation of the extensive Nazi fortifications attacked by Earl Rudder's Rangers, and to establish the geophysical condition of the cliffs, eroded by over ten meters since 1944, to provide data for the conservation and interpretation of the site. The symposium will include a major component on the recording and analysis of Pointe du Hoc by a team, led by CHC Associate Director Robert Warden, that includes historians, architects, civil engineers, and geotechnical specialists using a variety of conservation techniques.

The first day of the symposium will take place at A&M's Riverside Campus, site of the former Bryan Army Air Base, a major WWII

facility constructed in 1942 to train pilots in instrument flight. That March 2 session will allow participants to study long-span timber construction and the development of historic structure reports. To add verisimilitude to the experience at “Bryan AAFB,” attendees will be able to examine a privately held collection of WWII vehicles immaculately restored by Brent Mullins of the GI Museum of World War II in College Station. Also scheduled that day are guided tours of three military structures dating from the active periods at the base.

Sessions on March 3 will be held at the College of Architecture's Geren Auditorium and will cover issues of conservation technology. Of special interest will be a presentation on Randolph Air Force Base, referred to as “The West Point of the Air” and now a National Historic Landmark with over 350 buildings, a talk on alternative strategies being considered to save the USS Texas, and the exploration of one of a POW camp at Hearne, just 12 miles north of Bryan, one of many such WWII camps that operated in Texas.

DAVID G. WOODCOCK, FAIA

The writer is a professor at Texas A&M University's College of Architecture and director of the A&M's Center for Heritage Conservation. He also is a contributing editor of *Texas Architect*.

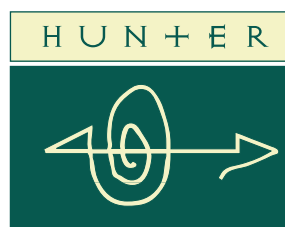
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The college's location in Lubbock (pop. 200,000) presents a challenge when addressing the option for professional experience for the nearly 875 students admitted into the various architectural programs offered, and as the profession changes, so does the necessity for practicum experience prior to graduation. In 2001, the Practicum + Studio Program was developed in Dallas as a response to this challenge and out of a commitment to the College's mission "to educate students for future design practice and to advance knowledge of the discipline for the benefit of society." In 2004, the program was expanded to Houston, and to El Paso in 2005. A partnership is created between participating firms and the college, whereby firms agree to meet particular standards of education within the context of the professional experience, while students work 35 hours per week in addition to participating in an active design studio integrating projects that impact the urban context.

The program was selected for the 2006 NCARB Prize from a field of 33 entries nationwide. Celebrating its five-year milestone, the NCARB Prize recognizes the most innovative faculty efforts to link practice and education

in a studio setting. The jury is composed of NCARB's Practice Education Committee and six deans (or department heads or chairs) of accredited architectural programs. In announcing the award to Texas Tech, the board noted that "prize jurors were pleased to recognize the long-term, successful way in which the university developed and sustained a program of integrating practice and education in response to their context."

In the spring of 2006, the Dallas Practicum graduate urban design studio integrated the old and new as it developed a master plan for an extended area of Deep Ellum seeking ways to connect to the Baylor Medical Center and Fair Park. In addition, the student teams worked to develop a recommended mixed-use for the redevelopment of the historic Dr. Pepper plant building. The studio host firm, Good Fulton & Farrell Architects, recommended the project as an opportunity for the students to learn about the urban context through a design problem that would engage the firm and its clients, E2M Partners and the Jim Lake Companies.

Involvement by the profession within the context of the design studio creates an extraor-



PHOTO BY MARVALICT TORRES-MACDONALD

The Dallas program included studio reviews at the offices of host firm Good Fulton & Farrell Architects. Team members Amy Cho, Richard Gilliland and Nolan Bradshaw participated in the design of a master plan for part of Deep Ellum east of the downtown.

dinary learning environment for the students, as well as critical connections that bridge the profession with education. In addition, partnerships developed through the studio projects afford opportunities for greater involvement with city officials and community organizations.

"The students were able to peel back the layers of complexity, truly seeking solutions to factors and forces beyond the four corners of the property," Herb Goodman of E2M Partners said in describing the students' participation. "From this vantage point, the student teams were able to synthesize a vast amount of factors that are very 'real world' and will significantly impact the ultimate success or failure of this project."

Students viewed their experience as equally significant. "We were viewed as more than just students in a class, but as active participants within a complex project," said Lauren Cortinaz. "Our teams were able to develop promising solutions to existing professional problems. Meeting with the people directly involved in decision making for the City of Dallas gave us all a better understanding of the necessary steps we, in the field of architecture, must take in order to ensure a design solution that best suits a community's needs."

In the summer of 2004, the Houston Practicum + Studio began, with the faculty again addressing the challenge for establishing an innovative and valuable practicum experience. The Houston program focuses on creating a studio learning environment that is integrated with the profession, building a stronger relationship with the profession and the college through collaboration, and providing a studio project to allow a unique academic experience



DRAWING BY NORTH KEERAGOO

Houston's Intermodal Center and Multimodal Terminal was the focus of the summer semester's program. Houston team members North Keeragool, Taylor Currell, and Crisol Negron conceived the solution for the future facility.

through involvement with the client and community. Houston provides Texas Tech architecture students with exposure to internationally recognized firms and buildings, while allowing them to work in environments that suit their individual professional learning needs. Professional partners act as consultants who work one-on-one with student teams to address structural engineering and mechanical systems, in addition to project-specific issues. The Houston Practicum + Studio is further supported through the involvement of practitioners through a lecture series aimed at exposing students to the various aspects of the architectural profession and supplemented by an electronic newsletter that serves to strengthen the network between partnering firms and the studio environment.

Through a partnership with Central Houston, the organization that has guided the redevelopment and revitalization of downtown, a new project was defined for the summer program—Houston's Intermodal Center and Multimodal Terminal. Two student teams worked for 11 weeks to develop comprehensive schematic solutions for the terminal project from an existing feasibility study. Bob Eury, president of Central Houston and acting client for the studio project, noted, "We appreciated the fact that students would have the opportunity to work on this high-profile project and hope that it impacts them with a level of sensitivity and awareness to the urban context that is critical to their professional growth. They brought fresh eyes and creativity to a complex problem and we were fortunate the studio began at just the time of the feasibility and program completion, allowing the students to better understand the nature of this complex project."

The opportunity for high-profile projects evolves through continued relationships with a broad range of professional partners and it is these very partnerships that strengthen the practicum and studio experience. The studio projects, selected by the faculty in dialogue with professional partners, are determined based on their ability to spur innovation, provide a unique professional experience, and afford the opportunity to impact the project. As Texas Tech's Practicum + Studio continues to evolve, the program proves a unique and meaningful bridge between practice and education.

MARYALICE TORRES-MACDONALD

MaryAlice Torres-MacDonald is an associate professor in Texas Tech University's College of Architecture.

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Austin Firm Garner's International Award

A U S T I N Miró Rivera Architects' Pedestrian Bridge was among three projects receiving top-tier recognition in the 2006 *The Architectural Review* Awards for Emerging Architecture. Considered the best international award for young architects, the annual program celebrates the work of designers under the age of 45 who are at the start of their independent careers.

Last year's competition attracted entries from more than 50 countries with \$10,000 in prize money. That amount will be shared equally by the three design teams whose projects were selected as "Prize Winners." Pedestrian Bridge was the only entry from the U.S. to win an award. In all, 26 projects were recognized with three levels of awards. The two other projects honored as "Prize Winners" were Children's Treatment Centre in Hokkaido, Japan, by Sou Fujimoto Architect, and Handmade School in Rudrapur, Bangladesh, by the German team of Anna Heringer and Eike Roswag.

The AR Awards are for built or manufactured work, which can range across the spectrum

of design activity, from landscapes and urban spaces to furniture and cutlery. Jury criteria includes sensitivity to *genius loci*, awareness of ecological implications, constructional ingenuity, sensitive understanding of materials, and inventiveness in handling space and light.

The awards were announced Nov. 30 at the Royal Institute of British Architects in London. Projects honored in the competition were published in the December edition of *The Architectural Review*. The article on Miró Rivera's Pedestrian Bridge describes the project as "...a highly poetic structure that mimics and merges with nature" and notes that it is "...responsive and respectful but with its own distinct architectural integrity..." The article also recognizes Chuck Naeve of Austin-based Architectural Engineers Collaborative as a key member of the project team.

Miró Rivera's work will be exhibited at the RIBA in London through the end of February. In addition, firm principals Juan Miró, AIA, and Miguel Rivera, AIA, will travel to London in February to lecture as part of the RIBA's Emerging Architecture Series 2007.

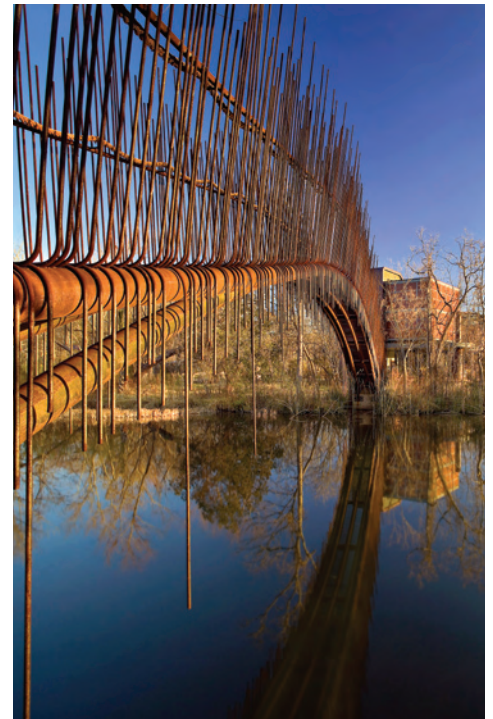


PHOTO BY PAUL FINNEL

Featured in the May/June 2006 *Texas Architect*, Miró Rivera's Pedestrian Bridge was also honored with a 2006 TSA Design Award.

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San Antonio Announces Design Awards

SAN ANTONIO Twelve projects received awards in AIA San Antonio's 2006 Design Awards. The projects were announced on Oct. 25 at a ceremony held at the Pearl Stable. The awards presentation served as the finale of the chapter's second annual "Architecture Month."

Serving on this year's Design Awards jury were David Brems, FAIA, of Gillies Stransky Brems Smith in Salt Lake City; Wendy Evans Joseph, FAIA, of Wendy Evans Joseph Architecture in New York City; and Douglas D. Hanson, AIA, of DeStefano & Partners in Los Angeles.

Three projects received Honor Awards—Penn State School of Architecture and Landscape Architecture designed by Overland Partners Architects, Government Canyon Visitor Center by Lake/Flato Architects, and 222 Austin Highway by John Grable Architects.

Pennsylvania State School of Architecture & Landscape Architecture encourages interaction between two related but independent depart-

ments. Existing pedestrian paths are incorporated into the building, increasing connections and visibility to the rest of the campus.

Government Canyon Visitor Center sits at the mouth of the canyon, forming a gateway to the state preserve. Designed for water conservation, the center collects rainwater, minimizes runoff, and reduces the use of ground water.

A motor lodge turned office building, 222 Austin Highway features sculptural lighting and elemental materials such as long-leaf pine and carbon steel that contribute to the structure's minimalist design.

Merit Awards were presented to Casa 218 and Groveton Street Studios, both by Candid Rogers Architects; Prim Library by Lake Flato Architects; and the Wildlife Experience Center by Overland Partners.

Citation Awards were given to Methodist Healthcare Ministries Corporate Headquarters by Kell Muñoz Architects; Lake Tahoe Residence designed by Lake/Flato Architects; and Blue Star Lofts by Sprinkle Robey Architects.

The jurors presented the Mayor's Choice Award for a publicly funded project to the Julia Yates Semmes Branch Library by Rehler Vaughn & Koone.

The 25-Year Award, bestowed for the second time by the chapter, went to the Tower Life Building, designed by the father-son architectural team of Atlee and Robert Ayres. Originally known as the Smith-Young Tower, the Tower Life Building opened in 1929 and was the tallest building on the downtown San Antonio skyline for nearly 50 years.



The Wildlife Experience Center



Penn State School of Architecture



Casa 218



Methodist Healthcare Ministries Corporate Headquarters



Government Canyon Visitor Center



Groveton Street Studios



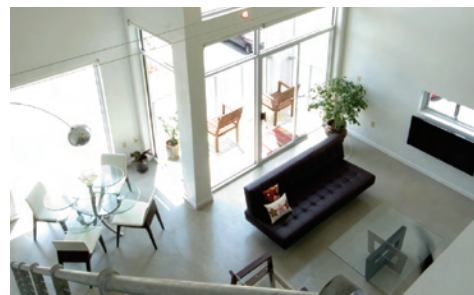
Lake Tahoe Residence



222 Austin Highway



Prim Library



Blue Star Lofts

AIA Fort Worth Awards Seven Projects

F O R T W O R T H AIA Fort Worth recognized seven projects at the chapter's 2006 Design Awards ceremony held at the Modern Art Museum.

A panel of three jurors – Teddy Cruz, of Estudio Cruz in San Diego; Rick Archer, FAIA, of Overland Partners in San Antonio; and Sharon Odum, AIA, of Sharon Odum Architect in Dallas – presented Merit Awards to Ryan YMCA in Fort Worth by Hahnfeld Hoffer Stanford Architects; Lee Elementary School in Denton by VLK Architects; and Good Shepherd Catholic Community in Colleyville by Jim Bransford Architect.

The Ryan YMCA project addition reorients the existing entry and expresses the building's connection to the community. Degrees of transparency and color and movement in the scattered glass draw attention to the activities within.

Lee Elementary School was built in four phases to allow the existing campus to remain fully functioning during construction. The main corridor articulates the curved academic

wing and separates public areas from the classrooms, library, and administrative spaces.

Good Shepherd Catholic Community, a 1,600-seat Catholic church, seeks an alternative to traditional religious architectural forms. Asymmetry is used in place of formal axial composition to create dynamic shifts in the traditional location of the liturgical centers.

A panel of three jurors – Paul Dennehy, AIA; Chad Davis, AIA; and Emery Young, AIA – recognized three student projects. Honor Awards were given to the Dallas Architecture Center and the Modular Learning Facility, both entries by Ogheneruno Okiomah from UT Arlington. A Merit Award was given to the Nedderman Mixed-Use Development, by Constantine Alexandris from UT Arlington.

The Dallas Architecture Center features a hollow core design that unifies the various levels, visually connecting occupants while keeping openness an integral part of the structure.

The Modular Learning Facility design features a sustainable portable classroom that itself becomes a teaching tool by involving

efficient means of construction through eco-friendly systems. The facility features modular building, passive solar heating/cooling, natural ventilation, and water capture/re-use.

The Nedderman Mixed-Use Development design adds connectivity and new life to this area of campus. Dormitories and facade updates fold around new courtyards and pedestrian paths, creating a defined and welcoming entrance.

The Mayor's Award was presented to Weldon Hafley Development Center by VLK Architects. The jurors for the award were Fernando Costa, planning director for City of Fort Worth, and Glen Whitley, a Tarrant County commissioner.

This project transforms an abandoned food store into an inviting space to house preschool, early childhood, Head Start, and special needs students. The design utilizes color and shapes as a functional way-finding tool and creates a dynamic environment for teaching children.

IVONNE LEVIN, AIA

The writer chaired AIA Fort Worth's Excellence in Architecture Committee in 2006.



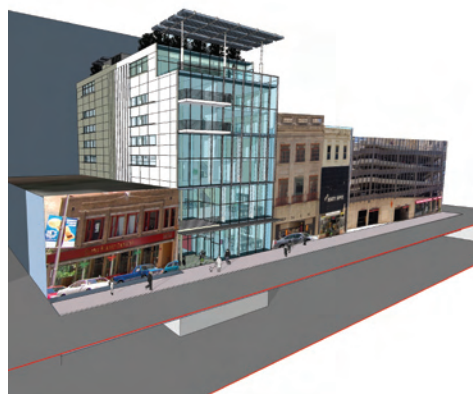
Ryan YMCA



Lee Elementary School



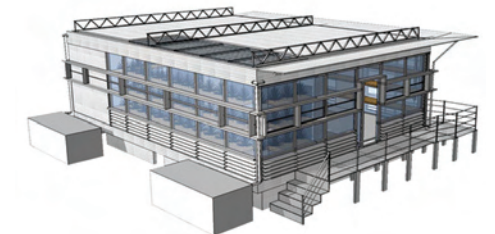
Good Shepherd Catholic Community



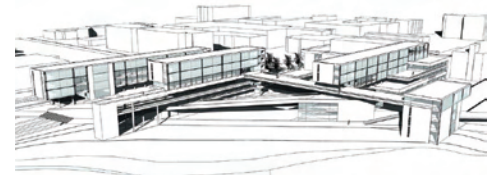
Dallas Architecture Center



Weldon Hafley Development Center



Modular Learning Facility



Nedderman Mixed-Use Development

National Trust Awards Two Sites in Texas

In November, the National Trust for Historic Preservation presented its National Preservation Honor Award to projects in Texas—The Southwest School of Art and Craft in San Antonio and Socorro Mission in El Paso. The projects were among 21 national award winners honored in the National Trust's annual awards.

The long-vacant campus of the Ursuline Academy—the first school for girls in San Antonio—was purchased in stages beginning in 1965 by the San Antonio Conservation Society to prevent its demolition. In 1971, the Southwest School of Art and Craft moved into the Ursuline site, and by 1980, all of the former Ursuline grounds and buildings had been purchased. In the ensuing decades, more than \$20 million has been invested in rehabilitation of the handsome limestone buildings and grounds, and a recently completed master plan provides a blueprint for the future. Today, the complex is a center for arts education and community events that attract more than 200,000 people annually.



Southwest School of Art and Craft



Socorro Mission

Socorro Mission, one of the most significant historic sites in the Southwest, was founded in 1682 to serve Spanish and Piro Indian refugees who fled the Pueblo Revolt in New Mexico. While the mission buildings were twice swept away by floods, the current structure dates to 1843 and the building's distinctive adobe facade, bell tower, and sanctuary were added in 1872.

Unfortunately, the exterior of the mission was plastered with cement in the twentieth century, trapping damaging water in the walls. In addition, decades of sun, rain, heavy use and misguided maintenance left the church with rotting timbers, a leaking roof, and walls that threatened to topple. Today, several years and 20,000 adobe bricks later, those problems have been corrected. Most of the mission's rehabilitation was done by volunteers, including parishioners and others from several countries—all trained in traditional building skills by the nonprofit Cornerstones Community Partnerships. Their labor was augmented by archeological, architectural, and historical research that will benefit similar preservation projects everywhere.

2007 AIA Convention to Spotlight San Antonio

The 2007 AIA Convention, set May 3–5 in San Antonio, will showcase the landscape, architectural traditions, and hospitality of Texas.

Activities planned for the expected 24,000 attendees include *Fiesta! San Antonio*, a celebration of the city's beloved traditions hosted by AIA San Antonio. In addition, more than 60 tours will highlight every facet of San Antonio—from its historic Spanish missions to its south-side "ice houses," as well as much of the city's award-winning architecture.

Concurrent with the convention will be the debut of a new architectural guidebook, *Tradi-*

tions & Visions: San Antonio Architecture. The guidebook surveys the best of the city's and region's built environment, and also includes essays on the natural and cultural factors influencing the city's development. Registrants who sign up for one or more tours will receive a free copy of the guidebook.

The convention theme, "Growing Beyond Green," inspired many of the planned activities. One example is the Green 150 gift—the planting of 150 trees in honor of AIA's sesquicentennial. Visit www.aiaa.org for information on how to contribute.

Heritage Documentation Programs

The Heritage Documentation Programs, a division of the National Park Service, seeks qualified applications for summer positions documenting historic sites and structures of architectural, landscape, and technological significance. Visit www.cr.nps.gov/hdp/jobs/summer.htm or contact Judy Davis at (202) 354-2135. Deadline is JAN. 15

Submittals Due for COTE Green Projects Awards

The AIA Committee on the Environment is accepting online submittals for the 2007 COTE Top Ten Green Projects awards program. To submit a project, go to www.aiaopten.org. For more information, contact Marsha Garcia at (202) 626-7488 or at mgarcia@aia.org. Deadline is JAN. 17

Dallas Architecture Forum Hosts Patrons Panel

The DAF presents a panel featuring architecture patrons Emily Rauh Pulitzer, Raymond Nasher, and Howard Rachofsky at the Dallas Museum of Art. Robert Campbell, Pulitzer Prize-winning architecture critic for *The Boston Globe*, will moderate the discussion. For more information, call (214) 764-2406 or visit www.dallasarchitectureforum.org. JAN. 17

RDA Sponsors Talks on Design in the Mainstream

"Design Goes Mainstream" is a series of four lectures presented by the Rice Design Alliance exploring why and how design permeates everyday life through commonplace objects. The first lecture will feature Suzanne Trocmé, special projects editor of *Wallpaper* magazine. All lectures begin at 7 p.m. in the Brown Auditorium at the Museum of Fine Arts, Houston (enter via the Main Street door). Call (713) 348-4876 or access more information at www.rda.rice.edu. Series begins JAN 17

Registration Forms Posted for TAMU Symposium

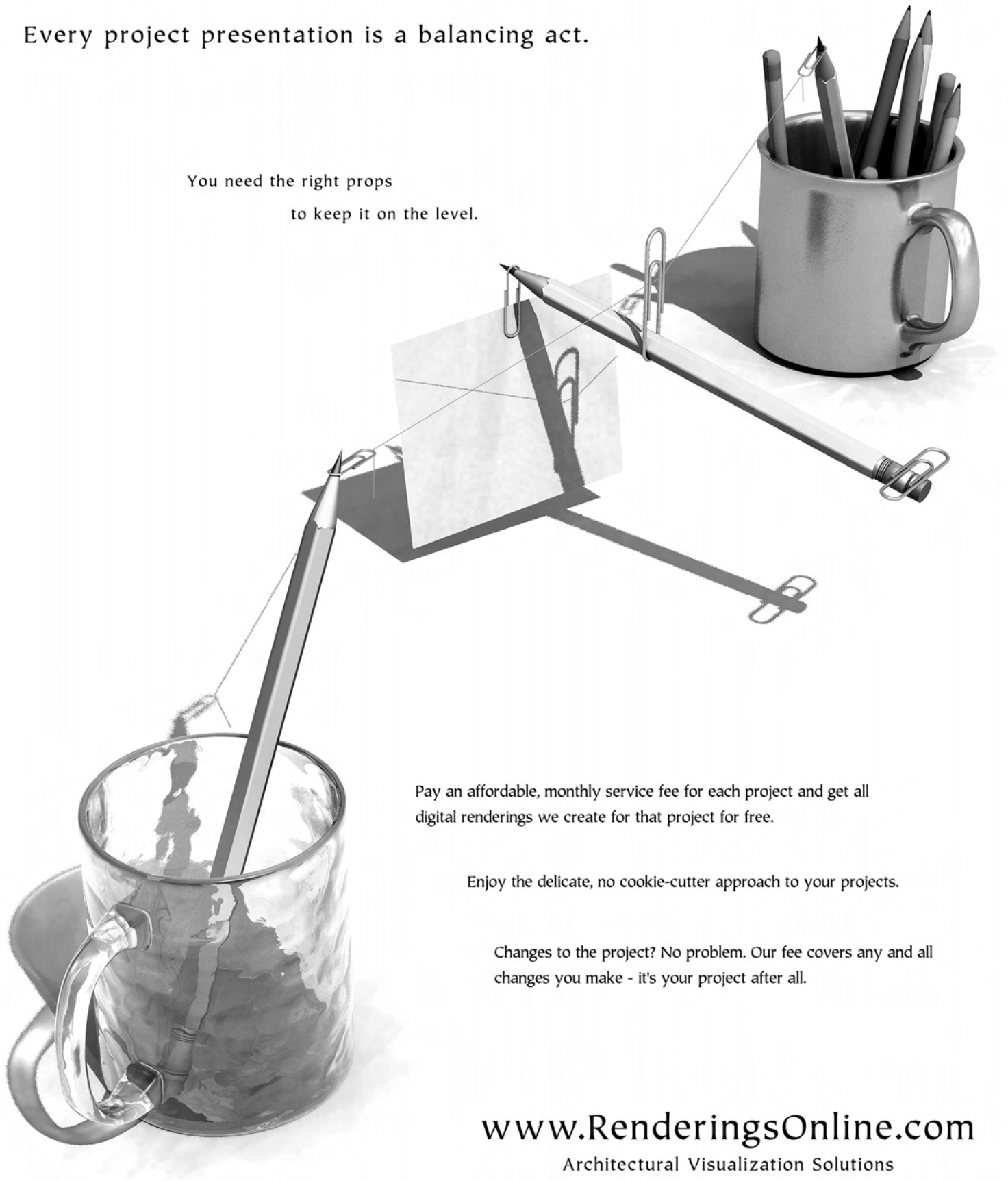
Texas A&M University's Center for Heritage Conservation will host the eighth annual Historic Preservation Symposium scheduled March 2–3 in College Station. Registration forms for the symposium will be available on the Center's Web site at archone.tamu.edu/chc by the end of January. For more information, call (979) 845-0384. JAN. 31.

Maya Lin: Art and Architecture at the Menil

The Menil Collection and Rice University's Department of Art History present a lecture by Maya Lin as part of the lecture series "Architecture and Museums." The lecture will take place at the Menil at 7 p.m. Admission is free to the public, but tickets are required. Call (713) 525-9400 or visit www.menil.org for more information. FEB. 2

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Dallas Cowboys' Stadium

The concept for the 2.3 million-sf sports venue in Arlington features a monumental pair of boxed arches that will support the largest retractable roof of its kind in the world. The stadium, designed by HKS Architects, is scheduled to open in 2009. Planned for a capacity crowd of 80,000 fans, the project is also noteworthy for having what will be the world's largest retractable end-zone doors, each with five 38-foot panels of glass to cover openings measuring 120 feet high by 180 feet wide. Other distinguishing features are a canted, 86-foot-high glass exterior wall and the world's largest center-hung video board. The stadium arches will soar 320 feet above the playing field and span 1,290 feet. Designed specifically to emulate the roof of Texas Stadium, the roof of the new venue will measure approximately 661,000 square feet and encompass 104 million cubic feet of volume. "This new stadium embodies the spirit of the Dallas Cowboys," said team owner Jerry Jones, "and that starts with the familiar 'hole in the roof.' What we have designed is a building we believe is both architecturally significant and also reflects the emotion and competition that goes on inside."

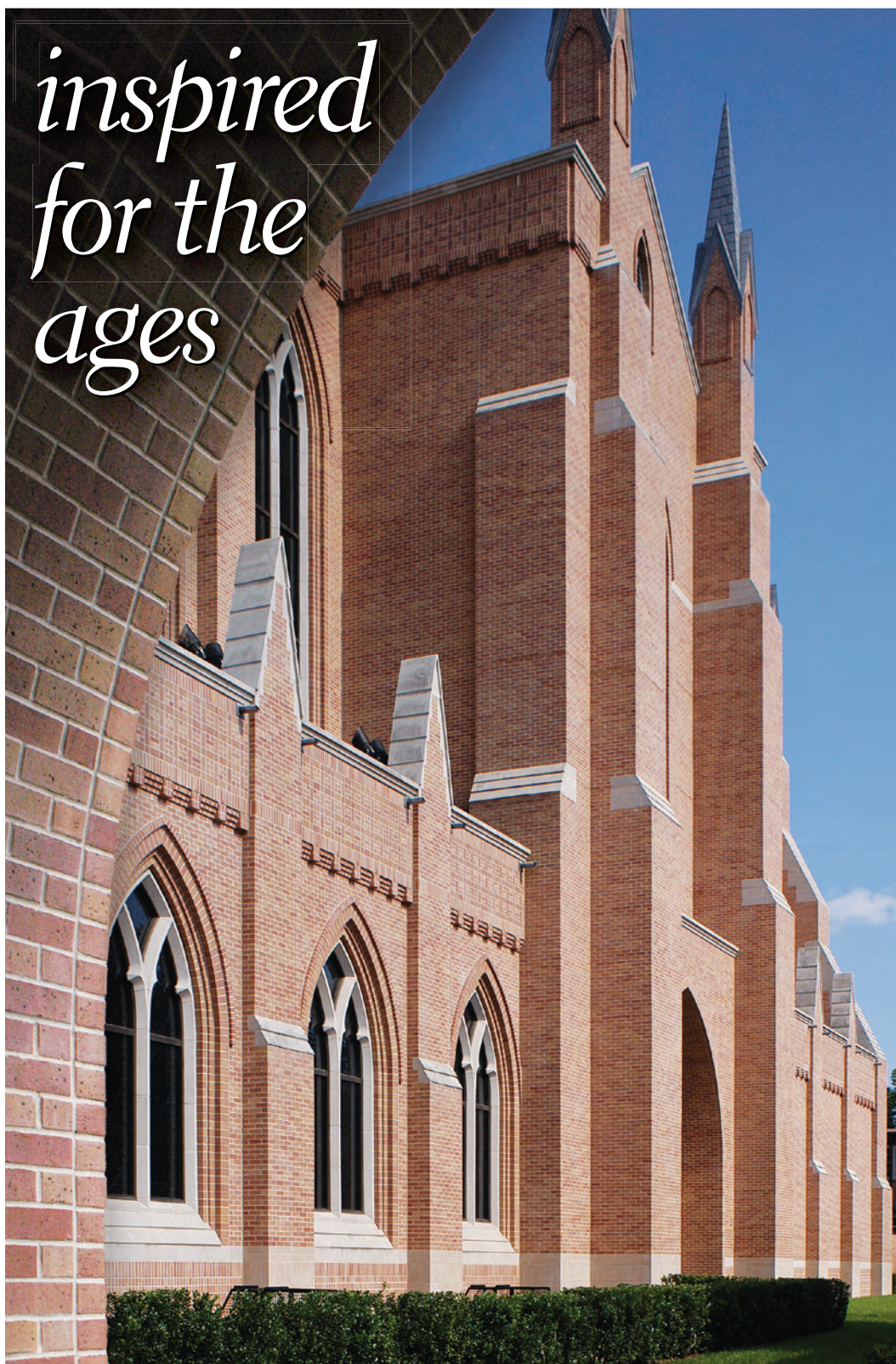
TAMU Interdisciplinary Life Sciences Building

The 228,000-sq. ft. Interdisciplinary Life Sciences Building, designed by Perkins & Will's Houston office, is the largest single construction project in the 130-year history of Texas A&M University. The \$95 million, three-story building is sited prominently across from the historic Simpson Drill Field and will serve as both a physical and conceptual link between the main campus life sciences corridor and the west campus research facilities. The building will include 95,000 sq. ft. of modular laboratories and research offices to support chemical, biological, and computational work. Additional functions include a vivarium, limited-wet teaching labs, a 300-seat auditorium, a coffee shop, and a large atrium to help foster cross-discipline collaboration. The project is part of a series of construction projects planned by the university at a total cost of approximately \$300 million, including a technologies and economic development building and expansions in the animal sciences department. The project is targeted for LEED Silver certification.



Amarillo International Airport Expansion

The focus of the renovation and extension is the so-called "meeter-greeter" volume that serves as a hub to connect a new airside facility and the existing landside component. Shiver-Megert & Associates of Amarillo is the lead architect, with Reynolds, Smith and Hills as aviation consultant. Configured in gentle arcs, the addition features radiating walls that layer out from the meter-greeter hub, maximizing views of the air field. The curved shape also creates logical options for further expansion in the future. Other project goals include providing five new gates to the terminal (expandable to seven), relocating the baggage screening facility, improving passenger screening capabilities, as well as increasing the airport's overall operational efficiency. The terminal addition features a statue of the airport's namesake, Rick Husband, an Amarillo native who was commander of the Shuttle Columbia when all seven crew members died after the spacecraft disintegrated in flight on Feb. 1, 2003.



Soaring twin spires proclaim the special role of Saint Martin's Episcopal Church as a beacon of peace and inspiration amid a densely urban environment. Its monumental presence fits well among neighboring high-rises, while its solid brick walls insulate it from city sounds. Architects created a refined blend of crisp Acme Brick to carry the weight and rise of the formal Gothic design and to provide delicate shifts in color to express historical details and patterns.

Saint Martin's Episcopal Church, Houston
 Architect: Jackson & Ryan Architects
 General Contractor: Tellepsen Builders
 Masonry Contractor: W.W. Bartlett

"We worked closely and extensively with Acme Brick to get the custom brick blend just right for this Gothic-inspired modern building. We collaborated to create both a strong, solid line for such a tall building and subtle variations in color for warmth and richness, which tied-in well with the church's original

brick structures. The custom blend also allowed for corbelling, basket weave patterns, and other details that recall brick churches of long ago in Germany. Using shaved bricks, we even created true load-bearing arches—over 200!"

*—John Clements, AIA, Principal,
 Jackson & Ryan Architects*

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UTenSails: A Design-Develop-Build Project

Students at UTSA learn about managing, funding, and building tensile membrane projects

by MAHESH B. SENAGALA

In my design-develop-build studio at the University of Texas at San Antonio, the cross-disciplinary notions of collaboration, leadership, and entrepreneurialism take center stage. In the spring 2005 semester, aided by \$102,490 in sponsorships, four full-scale permanent tensile membrane structures were successfully designed, engineered, and erected within a five-month period. Named collectively as UTenSails, the work was realized through collaborations with 24 industry partners from Asia, Europe, Australia, and North America.

Given the lack any local resources or knowledge of these structures, the initial goal was to design, develop, and build a modest 200-square-foot temporary tensile membrane structure. The intention was noble, but the challenge was daunting.

It is one thing for an experienced firm with professional staff to go confidently into designing, teaming, scheduling, engineering, and building these special structures. It is a different thing for students with full course loads, curricular framework, international suppliers, and engineering-intense technical challenges. To accomplish this unique set of challenges, the traditional studio structure of teaching had to be jettisoned in favor of a self-organizing, entrepreneurial, leadership-oriented, and collaborative model. Typically, students in an architectural studio competitively respond to a design challenge as individuals or in small groups. The professor usually serves as the master, in what I call the "Howard Roark model." By contrast, in the "firm model," all parties – the professor, the students, the professionals, the suppliers, and the fabricators – form a collaborative and entrepreneurial collective where everyone learns and benefits from the partnership. As a key partner, the professor facilitates learning and provides leadership.

In this case, students were asked to form a hypothetical architectural firm. An administrative layer of positions (office director, graphic designers, PR specialists, etc.) was established, with students invited to apply for positions based on experience and interest. A Web-based forum allowed project partners to communicate among each other at all hours. On top of the administrative layer, a professional layer of positions was created in which the students took on different roles to accomplish different project-specific tasks. These layers enabled a sense of ownership



One set of 'sails' was permanently installed at the main entrance to the UTSA College of Architecture. The realized project of tensile membrane structure closely resembles the design as envisioned by the class. All images are courtesy of the author.

"UTenSails" continued on page 23



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and responsibility. This form of studio organization engendered parallel and professional relationships between the members of the studio.

While budgets, schedules, systems coordination, resource management, and contingency planning are not very fashionable educational topics, the studio brought these critical tasks to the enterprise. Also emphasized were the art of raising funds, forming partnerships, and creating opportunities where none exist. Many international companies and engineers were approached by the professor for the donation of materials and services, with students focusing on local sources for hardware donations. As previously mentioned, 24 international entities expressed interest in participating in the design-build project. Given the generosity of the industry partners, and emboldened by the engineering support from four practicing engineers, the studio decided to expand the scope and scale of projects.

The first four weeks were dedicated to experimentation, learning the basics, and trying out the actual fabrication processes which would later be employed in building the full-scale structures. Contrary to the popular belief, tensile fabrics are not stretched to assume a curvilinear form. In fact, the stretch of these fabrics is less than one percent, so understanding how double-curvilinear forms are achieved by combining flat, two-dimensional panels was very important. Teleconferences with the engineers and manufacturers became a weekly event throughout the process. The project was primarily designed and fabricated with the aid of specialized software.

Two large, permanent structures of 1,200 square feet of fabric were considered given the expanded scope. Four student teams were asked to produce proposals for five different entry points of the College of Architecture building. Two structures were chosen for immediate development in consultation with the college and university administration. All the students were expected to work on both the major projects in a collaborative fashion. Additionally, a small subset of the students was asked to experiment with "tensegrity" structures and a portable, stretched-Lycra structure. Thus, in all, two large and two small projects were to be built by the end of the semester.



A second permanent installation of tensile membrane structure serves as an entrance canopy. Specialized software was used to design and fabricate the components that students cut and stitched at workshops whose owners helped sponsor the project.

Much time was spent in developing design and obtaining the legal permissions. Issues of liability were a big concern for all parties involved, and an engineer of record and a general contractor of record were required.

Students spent countless hours participating in the fabrication at various shops whose owners donated expertise. Even considering the educational and charitable nature of the project, all the sponsors were timely in their deliveries and responded professionally to the ever-changing details and specifications.

There was much sweat shed in accomplishing the many daunting tasks of making the aluminum masts, fabric sails, concrete footings, stainless steel plates; installing the helical anchors; surveying the land; precisely establishing the anchor points; and organizing all the components for the final erection process. On June 25th, with the generous sponsorship of a general contractor, the structures were erected within a span of four hours. The cables were systematically tensioned to achieve the required pre-stress using precise engineering calculations by Robert Harper, PE.

These poetic projects, which began as minor design-build experiments have grown into significant and permanent projects. UTenSails have become the seeds for community building at our institution. Especially for a college of architecture, with hundreds of students and professionals walking under these structures every day, they will remain the best introduction to the value of learning through collaborative building.

Maresh B. Senagala is an associate professor at the UTSA's College of Architecture.

Students participating in the project were Shad Calvetti, Steven Cordero, Michael Czimskey, Curtis Fish, Hector Guevara, Matthew Martinez, David Matiella, Hector Mendez, Sarah Ness, Joshua Pierce, Ryan Squyres, and Andrew Wit. The UTenSails project was made possible by AB Chance; Astrup Company; Bruni The Weldor; the Chism Company; Comet Signs; Constructors and Associates; Dazian; Delta Prime Specialities; Fiesta Bolt; Garces Metal Speciality; Hayn Enterprises; Hendee Enterprises; Hiraoka and Co.; Home Depot; Lawrence Calvetti, PE; Lowe's; Meliar Design; Rich Thorsten, PE; Robert Harper, ALA, PE; Ronstan International; Verseidag Seemee U.S.; W.L. Gore and Assoc.; and Wayne Rendely, PE.

New Dallas Schools

With funds from a \$1.37 billion bond program, DISD builds to accommodate its growing enrollment

by WILLIS C. WINTERS, AIA

THE Texas schoolhouse is evolving into something new and different at the beginning of the twenty-first century as the state's burgeoning growth has fueled an intense building campaign.

Over the past eight years, school districts have expanded facilities in their struggle to keep up with dramatic increases in school-age population. Suburban districts, in particular, experienced significant increases in enrollment. Between 1989 and 2001, San Antonio's two largest districts grew by 32 percent; the three largest suburban districts in the Dallas-Fort Worth area increased by 50 percent; and Houston's three biggest suburban districts mushroomed by a whopping 63 percent. Enrollment in the state's four major urban school districts expanded by a comparatively modest 21 percent during this same period. The Dallas Independent School District

led the growth of Texas' largest cities, with a 30-percent increase in student population.

This unprecedented growth has resulted in one of the most ambitious public building programs in recent memory. Since 1999, the state's 10 largest school districts have successfully passed bond referendums totaling over \$5.4 billion, which provided funding for the construction of more than 100 new schools, as well as renovations and additions at aging campuses. More than half of these new schools are being built by the three largest districts in Texas—29 new schools by Houston ISD, 21 by Dallas ISD, and 11 by Cypress-Fairbanks ISD on Houston's north side. The new schools in Dallas were funded by a \$1.37 billion bond program in 2002, one of the state's largest capital referendums for public schools.



COURTESY PERKINS + WILL



Four years into the Dallas ISD bond program, much has been accomplished. Sixteen of the 21 new schools are open, three are currently under construction, and two are in design. Similar progress is reported on the remainder of the program, including additions to 57 schools (ranging in size from a handful of rooms to 168,000 square feet of new space), renovations to over 200 schools, and the addition of classrooms at 21 elementary schools for the district's Early Childhood Education program. DISD chose program management as the delivery method for this massive and complex bond program, working with three firms – Austin Commercial, Jacobs/Pegasus, and DMJM – to manage the new construction as well as the expansions and renovations of virtually every school in the system.

Architects selected to design the 16 new elementary schools, four middle schools and the single new high school were provided by the district with an “educational specification” document prepared in 2001 by Heery International and DeJong & Associates, a strategic school planning and programming firm based in Ohio. These program documents – one for each type of school – provided the architects with a vital link between statements of educational programming and the building specifications. The elementary school program, for example, emphasized the importance for students to be intrinsically motivated to analyze problems, formulate creative solutions, and communicate their ideas both verbally and through a variety of media. These educational goals could be best accomplished in a built environment that provides for a variety of small and large groupings, individual instruction and solitary exploration. The resulting program model for each of the 16 new elementary schools called for 33 classrooms (Pre-K through grade 5) organized into four core academic areas. Each of these academic areas was comprised of two grade levels of four or five classrooms each, with the exception of grade 5, which was a stand-alone grade. In addition to the core areas, classrooms were also provided for special and alternative education. The projected enrollment at each elementary school was 824, with a total program area of 90,000 gross square feet. The



(opposite page and this page) The three-story Hector P. Garcia Middle School by Perkins + Will is expected to help transform a decaying commercial district.

“DALLAS SCHOOLS” continued on page 59

Shared Resources

by MICHAEL MALONE, AIA



PROJECT Arcadia Park Elementary and Public Library, Dallas
CLIENTS Dallas ISD and the City of Dallas
ARCHITECT VAI Architects
DESIGN TEAM Barton Drake, AIA; Jeffrey B. Simcik; Tim Hartman; Ola Roos; Tom Kemp; Jaime Ramirez
SITE CONTRACTOR Rogers-O'Brien Construction
GENERAL CONTRACTOR/CONSTRUCTION MGR Coronado Builders
CONSULTANTS Charles Gojer Associates (structural, civil); Bayse + Associates (MEP, technology); Pacheco Koch (property survey, civil); Caye Cook & Associates (landscape); H.G. Rice and Company (kitchen); Cedrick Frank Associates (A/V, acoustics); Apex Cost Consultants (cost estimating); HBC (geotechnical); Accessology (accessibility); Eliseo Garcia (public art)
PHOTOGRAPHER Miguel Casanova

(this page) The branch library has its own separate entrance at the eastern terminus of the complex. **(opposite page, top)** An intimately scaled children's reading area attracts youngsters with whimsical features. **(opposite page, bottom)** Cubic exterior forms at the school's entrance reflect the heritage of the neighborhood's mainly Hispanic population.

Within the re-emergent Oak Cliff neighborhood on Dallas' south side, the new Arcadia Park Elementary School and Branch Library demonstrates how civic buildings can focus the life of a community around an institution. Designed by Dallas-based VAI Architects and located in a stunning site with elevated views towards downtown Dallas, the complex spreads out along a continuous linear spine that provides circulation between classroom wings and shared common amenities.

As the first new school built with funds from the landmark 2002 Dallas Independent School District bond election, Arcadia Park Elementary replaced a decrepit facility well past its useful life that had long been identified by DISD planners as a priority for new construction. It further provided a test for the new but extremely practical idea of merging a City of Dallas branch library with a DISD school. In the case of Arcadia Park, the new branch library has a home in a neighborhood that was in need of such a facility. DISD could not have provided such a spacious and well-equipped media center, and the steady use of its resources is assured by its being connected to the school.

Arcadia Park was VAI's second new DISD school and the project offered the firm an opportunity to define new professional expertise. As a new ground-up school for 800 students, the resulting building was programmed to be over 114,000 square feet. The ambitious program, with discreet elements including a separate auditorium, gymnasium, and cafeteria to support programs in media, visual arts, performing arts, instructional technology, and physical education used every bit of the square footage and budget.

Working from the guidelines DISD produced for new schools to be built after the bond election, VAI began with a site plan that took the best advantage of the sloping site, trees, and views. The architects immediately recognized that this was perhaps the most beautiful, if not exceptional site in Dallas on which to build a school. From the earliest design diagrams, VAI incorporated the internal street, or "spine" as Barton Drake, AIA, VAI's design principal, calls it. The clear organizational diagram of the school, with all the various functions being accessed from the circulation spine, is a response to the narrow site which fronts on the neighborhood and backs up to a steep bluff. The topography



of the 14.6 acres includes a grade change of almost 40 feet and is about 40 percent wooded with dense groupings of trees. Entered from neighborhood streets that terminate in the site, the views of the school spread out as a line of smaller buildings of varying heights and massing. Because vehicular and pedestrian access is from the neighborhood side of the site only, the parking lot forms an open space that allows the full expanse of the building to be viewed at one time. With all the parking and access limited to the “front” elevation, the school is spread out before visitors as a varied composition of elements, shaped as a discreet collection of masses to reflect their internal functions. Due to the dramatic sloping drop off of the bluff behind, all the access for the school happens from the front, a problem solved by ending the west end of the spine in a service/mechanical yard and the east end in the library.

The cubic exterior forms are a frank interpretation of Latin American contemporary architectural themes, appropriate for the heritage of the school’s student body, here rendered primarily in masonry and stucco in strong earth tones and terracottas. Against the backdrop of the verdant park-like setting and uninterrupted blue sky, these colors have a formal presence that in an urban setting might otherwise appear visually disruptive in comparison to adjacent buildings. The color scheme appropriately transitions into the interiors to create a welcoming and cheerful ambiance, especially within the spine where clerestories suffuse the corridors with natural light.

The gently arching spine connects the classroom wings with common elements such as the entry lobby, gymnasium, cafeteria, offices, computer





room, and auditorium. The final point of the spine is the branch library, with its own portal that can be closed off to separate the facility from the rest of the school. The upper level of the spine has circulation on one side, allowing views into the space from above.

The two center-loaded classroom wings, each two-stories tall, have windows that open into courtyards and playgrounds, again taking advantage of the open site and views. Preplanned to allow for expansion, the classroom wings are organized by grade level with science rooms and other specialized facilities grouped near classrooms for older students.

Still, accommodating the full program required constant cost cutting that diminished the quality of the interior finishes and impacted exterior features. Knowing that opportunities were unlikely to add programming elements lost to budget shortages, DISD managers were reluctant to find savings by combining functions such as a “cafetorium.” While that reluctance resulted in a full complement of amenities for Arcadia Park Elementary (including a gymnasium, cafeteria, and auditorium), the selected materials appear to require a high level of maintenance if they are to last.

The City of Dallas branch library shares a common palette of colors and textures with the school, but the benefits of the higher cost per square foot budget are obvious. Additional funding allowed the building to obtain LEED Silver certification, as well as a more tangible level of detail and craft. The building is organized so that the stacks, set in a radial pattern from the central control desk, project views toward the curving perimeter glass of the reading rooms. Special attention was paid to the intimate scale of the whimsically appointed children’s library area with durable benches and intimate nooks that encourage reading within the larger space.

Despite budget and schedule challenges, the clarity of the site plan and the overall organization provide a cheerful and pleasant place for the education of Arcadia Park’s students. It is a fitting starting point for DISD’s planned facilities expansion, and combined with the branch library it extends life to the site well after the students have gone home. ■

The writer directs the Dallas-based Michael Malone Studio within WKMC Architects.

(this page) The library is organized in a radial pattern. **(opposite page)** The library, at far right, shares a common palette of colors and textures with the school. The corridor connecting the two facilities can be closed after school hours to accommodate the library’s longer hours of operation.

RESOURCES CONCRETE PAVEMENT AND CONCRETE MATERIALS: Holcim, Lofland (Lattimore Materials); VINYL COATED CHAIN LINK FENCE: Merchants Metals; MONUMENTAL SIGN: Akzo Nobel; SOUND ABSORBING MASONRY UNITS: Trenwyth Industries; CMU: Featherlite; BRICK: Acme Brick; FLASHING, MASTIC, AND ADHESIVE: Polyguard Products; STRUCTURAL STEEL: Basden Steel Corporation; STEEL JOISTS: SMI Joist; METAL ROOF DECK: Consolidated Systems; ACOUSTIC METAL ROOF DECK: Consolidated Systems; STEEL RAILS: Basden Steel Corporation; MEMBRANE ROOFING: GAF Materials Corporation, Soprema; METAL ROOFING: Berridge Manufacturing; ALUMINUM WINDOWS: EFCO Manufacturing; PLASTER: Senergy; TILE: Daltile, Tarkett; ACOUSTICAL TREATMENTS: Interface Fabrics, Tectum; SIGNAGE: Benchmark Signs; OPERABLE PARTITIONS: Moderco Partitions; EXTERIOR SUN CONTROL: Industrial Louvers



Sleek Landmark

by CHARLES W. GRAHAM, PHD, AIA





SEVEN stories tall and architecturally distinctive, Texas A&M University's new Jack E. Brown Engineering Building serves effectively as a gateway to the College of Engineering. The site, along the campus arterial University Drive at the extreme northeast corner of the campus, is an ideal location for this sleek landmark. Motorists and pedestrians approaching from any direction can't overlook this 205,000-square-foot facility, a noticeable departure from the more conventional designs of surrounding buildings. Among its many distinguishing characteristics are a meditation garden, a plaza overlooking a creek, and glass "sky lobbies" at the elevators that provide panoramic views of the campus to the south.

Completed in November 2004 at a cost of \$38 million, the building houses A&M's Chemical Engineering Department. Houston-based Parsons-3D/I (formerly 3D/International) designed the building that bears the name of Jack E. Brown, a 1950 graduate who co-founded Wagner & Brown, Ltd., an oil and gas production company in Midland. A \$5 million gift from Brown and his wife, Frances, was the largest private donation toward construction of the state-of-the-art building. The project's distinctive design has been recognized with *Texas Construction* magazine's Best of 2003 Merit Award for *Architectural Design* and *American School and University* magazine's 2004 Architectural Portfolio Award for Outstanding Design for Works in Progress.

On the first floor are six general-use classrooms, computer laboratories, a 600-square-foot computer room, and six lecture halls. Arranged adjacent to each other, the lecture halls can seat a combined total of 435 people. Five of the halls are the same size, each seating approximately 75 people, and the sixth is almost twice as large and contains 145 seats.

Most of the second floor is given to offices for staff and faculty of the Department of Chemical Engineering, with the Mary Kay O'Connor Process Safety Center taking the balance of space on that level. Located on floors three through seven are classrooms, small conference rooms, research labs, and offices for graduate students. Due to the high security requirements, visitors to the building

PROJECT Texas A&M University Jack E. Brown Engineering Building, College Station

CLIENT Texas A&M University

ARCHITECT Parsons-3D/I

DESIGN TEAM Ray McClure, AIA; Darrell Comeaux, AIA; Gary Boyd, AIA

CONTRACTOR Vaughn Construction

CONSULTANTS Shah Smith & Associates (MEP); Walter P Moore & Associates (structural/civil); MCM Security Design (security); Clark Condon Associates (landscape); Shen Milsom Wilke (telecommunications); Rolf Jensen & Associates (life safety); JEAcoustics (acoustics)

PHOTOGRAPHER Jud Haggard

(opposite page) The new building exhibits its structural support system in a manner seen nowhere else on the A&M campus. **(this page)** The lobby's steel staircase is the focal point of the two-story volume.



Serving as a gateway to the corner of campus occupied by the College of Engineering, the new Jack E. Brown Engineering Building is hard to miss.

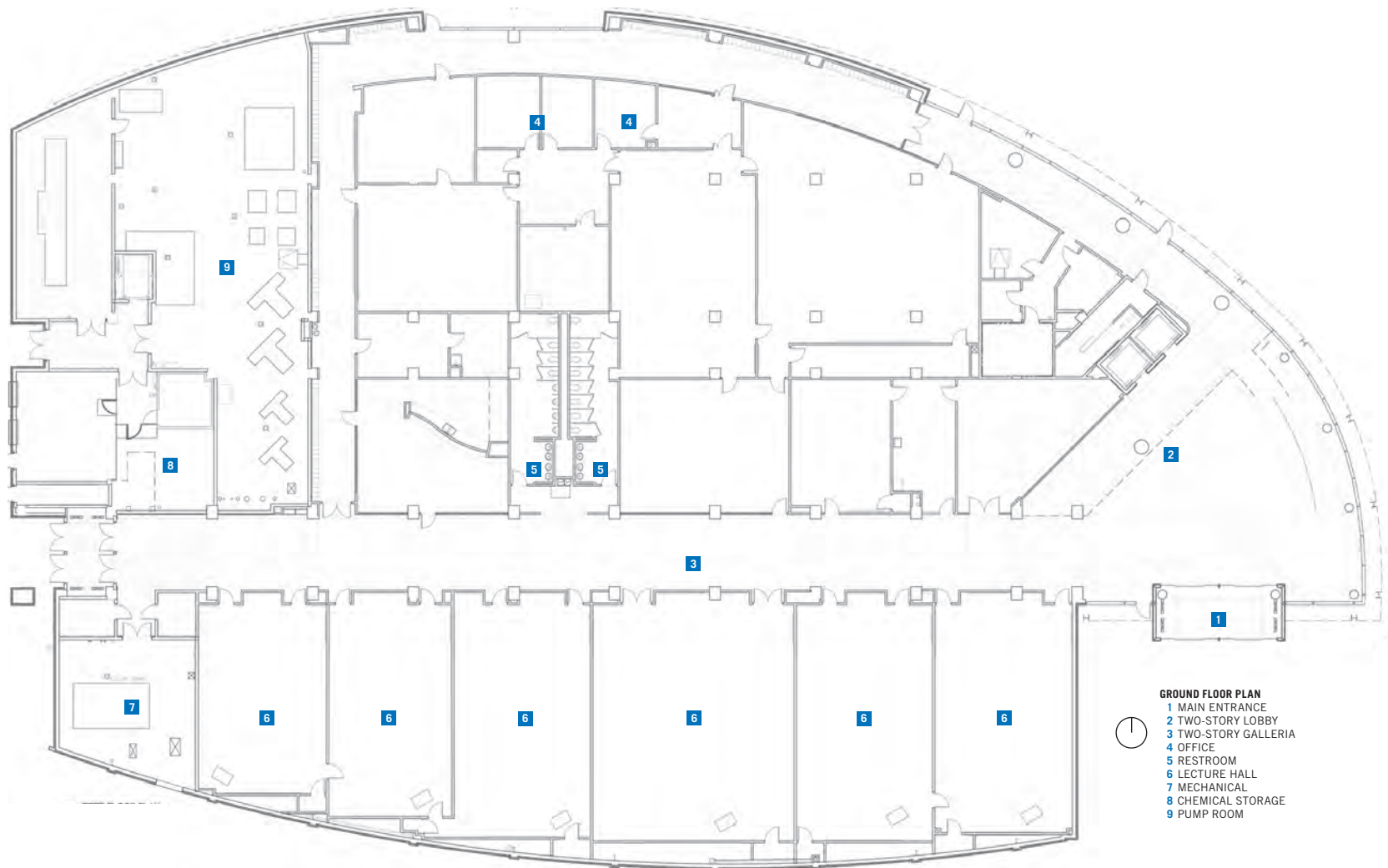
have their access limited primarily to the first-floor lobby and corridor. Visitors requesting access to other areas are directed to the second-floor offices of the Department of Chemical Engineering.

The first-floor plan is remarkable for its perpendicular intersecting walls. The exterior walls are gently curved, with a main lobby at the east end of the building. A patio faces onto University Drive at a level slightly elevated above grade. The footprint of the building sits neatly on its rather restrictive site and proximity to University Drive. The second floor includes an open “galleria” that extends the full length of the building. Faculty offices and graduate student offices line the perimeter, with classrooms and labs comprising the interior of the plan.

Floors three through six are essentially the same, with graduate student offices around half of the perimeter and labs at the interior. The seventh floor contains the additional component of “clean” rooms for specialized research in chemical engineering. According to the designers, the building is efficiently planned to use 58 percent of its floor area. The remaining 42 percent is dedicated to circulation, mechanical, and storage spaces.

The exterior of the building is a combination of steel and aluminum framing and curtainwall, with brick panels strategically placed to articulate the exterior surfaces. At night, the interior lighting shines through the glass curtainwall at the acute corner on the east end of the plan, creating an interesting ambiance in the night sky. Brick veneer walls face west to minimize solar gain and maximize the building’s energy performance.

Interior finishes are hard surfaces such as metals, terrazzo, and plastic laminates for ease of cleaning and durability. The quality of the natural light filtering through the structure into the interior spaces is a mixture of soft, indirect lighting and bright, direct sunlight. Natural light is articulated by the structure at the building envelope, creating variety and excitement in the interior circulation spaces at the ends of the building. A unique aspect of the design is the exterior structure at the glass curtainwall located at the acute end of the building facing east. The steel columns that are established outside the curtain wall (but which help support the floors inside these areas) show off



the structural support system in a manner seen nowhere else on the Texas A&M campus. More common are internal and external structural frames articulated with a glass curtainwall in between, and brick panels in between the structural frames.

The learning spaces in the building also represent a departure from the usual lecture spaces found in university facilities. The need to support an aggressive research program in chemical engineering meant the building had to be designed to include both chemical laboratories and computer laboratories. One of the more noteworthy spaces is a lab where many computers are wired together to create a “super computer.” The building’s extraordinary security measures and its seventh-floor “clean” rooms are indicative of the new type of learning environments being built at major research universities.

The scale, iconoclastic design, and unique profile of the Jack E. Brown Engineering Building heralds a new role for educational facilities on the Texas A&M University campus. Its interior spaces challenge conventional format by offering a variety of laboratories, lecture halls, offices, and support spaces that address the new set of program criteria required for the Department of Chemical Engineering. Perhaps this building also announces a new design format for future buildings on the campus. **T**

Charles Graham, PhD, AIA, is interim department head of the Department of Construction Science in A&M’s College of Architecture.

RESOURCES CONCRETE PAVEMENT AND CONCRETE MATERIALS: Transit Mix Concrete; SITE, STREET, AND MALL FURNISHINGS: Forms and Surfaces; MASONRY UNITS: Acme Brick; CAST STONE: Pyramid Stone; METAL DECKING: Vulcraft; ARCHITECTURAL METAL WORK: Forms and Surfaces; RAILINGS AND HANDRAILS: York Metal Fabricators; GLASS-FIBER REINFORCED PLASTICS: Decoform; MEMBRANE ROOFING: Brazos Urethane; ENTRANCES AND STOREFRONTS: Vistawall; GLAZED CURTAINWALL: Vistawall; TILE: Daltile; TERRAZZO: American Terrazzo; SPECIAL CEILING SURFACES: Gordon; ACOUSTICAL WALL TREATMENTS: Decoustics; PROTECTIVE COVERS: Pawling Corporation

Tight Site

by SUSAN WILLIAMSON



PROJECT St. Andrew's Dell Hall Middle School, Austin

CLIENT St. Andrew's Episcopal Church

ARCHITECT Susman Tisdale Gayle

DESIGN TEAM Jim Susman, AIA; Trenton Wann, AIA; Fred Peebles, AIA; Jeffrey Ervin; Heather Chasen; Ethan Glass, AIA; Christi Grider

PROJECT MANAGER Herndon, Stauch & Associates

CONSULTANTS MEJ & Associates (MEP); Architectural Engineers Collaborative (structural); Bury + Partners (civil); Land Design Partners (landscape)

PHOTOGRAPHERS Casey Dunn; Jeffrey Ervin

THE new middle school building at St. Andrew's Episcopal School in Austin represents one more step in a journey begun more than 15 years ago when school officials first collaborated with Austin architects Susman Tisdale Gayle. Over the years, STG has worked with the school to create a gracious campus composed of buildings set among large oaks and centered around what STG principal Jim Susman, AIA, calls "the community green"—the school's athletic field.

The school was founded in 1952 and occupied a single building on the banks of Shoal Creek just north of downtown for most of its first four decades. For many years, school officials had eyed a neighboring five-acre tract to the north, but had been unable to come to terms with the property owners. Fortunately for the school, the collapse of the local real estate market in the late 1980s made the acquisition feasible.

With a desire to plan for careful growth, the school's administration conducted a competition in 1990 with the goal of creating a master plan. Susman Tisdale Gale was ultimately selected, and over the subsequent 16 years STG designed structures that filled in the outlines of the plan it created for the campus. By the late 1990s the school asked STG to plan and design a second campus on an outlying site for a new upper school.

By 2002, the central campus was bursting at the seams again. The existing middle school, built for 108 students, housed 140. While grades nine through twelve had moved to the new campus, questions remained about a direction for the middle school. Because of their long-standing relationship, STG was in a position to help St. Andrew's answer those questions and then design a building to meet the school's needs. "Jim knows the values of the school," says Lucy Nazro, head of the school. After working on other St. Andrew's projects, she adds, the architects knew which types of spaces worked best for the school.

St. Andrew's faculty, administration, parents, and students worked with the architects to answer fundamental questions about the middle school, such as where it would be located and what grades would be included. They decided that the middle school should stay on the original campus and include grades seven and eight. A one-year programming phase followed. With that preparation,



actual construction went smoothly, Nazro says. Work began in January 2005 and students moved into new classrooms the following January.

The 28,000-square-foot Dell Hall Middle School is located on what Susman calls “the panhandle” at the northwest corner of the campus. Relatively isolated from the main campus, the site provides the desired sense of “graduation” from the lower school, but at the same time retains a connection to the playing field, the “community green.” Bounded on the east by a multi-story office building adjacent to the campus and to the west by the flood plain of Shoal Creek and studded with mottes of live oaks and outcroppings of rock, the panhandle site presented the architects with both constraints and opportunities.

Since the lower portion was in the flood plain, the middle school had to be pushed to the east, towards the office building. Creating views to the creek was a priority, as was saving as many trees as possible. The plan accomplishes that by locating support spaces and special classrooms – science, art, and music – in a shallow rectangle set on axis with the office building. Glazed openings on that facade are minimized (although the architects note an unexpected bonus: sunshine bounces off the office building, filling the east-facing spaces with soft natural light). On the west side, the building juts out and in and back out, weaving between the trees and creating a courtyard between classroom wings. Large windows in the 11 regular classrooms open to the wooded hillside and creek.

Many design decisions were driven by the school’s desire to create opportunities for students to gather. All middle-schoolers are placed into advisory groups of six to eight students, and establishing communal spaces for their regular gatherings was important. To that end, Susman says, the architects created “nooks and crannies” both indoors and out. For example, a small grouping of armchairs beside floor-to-ceiling windows on the second floor invites lingering, as do limestone slabs that step down the hill below the outdoor classroom and the benches inside a small, walled courtyard near the building’s entrance. At a larger scale, an area adjacent to the main entry was left open to create a space where the entire population of the middle school could gather. Students and faculty meet there in the morning for announcements, Nazro says, promoting the sense of community that parents and

(opposite page) The exterior composition of earthy shades – greens, terra cotta, orangey tan, and the creamy white of limestone – both organize and break down the building’s mass. (this page) Communal spaces inside and outside invite students to linger in small groups.



GROUND FLOOR PLAN

- 1 MAIN ENTRANCE
- 2 ASSEMBLY
- 3 FACULTY
- 4 CLASSROOM
- 5 OUTDOOR CLASSROOM
- 6 ART
- 7 MUSIC
- 8 RESTROOM
- 9 WORKROOM
- 10 KITCHEN
- 11 RECEPTION
- 12 CONFERENCE
- 13 OFFICE



CAMPUS PLAN

- 1 DELL HALL MIDDLE SCHOOL
- 2 CRUSADER HALL
- 3 WEST ROCK
- 4 PLAYING FIELD
- 5 ROLLINS LIBRARY
- 6 LOWER SCHOOL
- 7 BUSINESS OFFICE
- 8 SMALL GYM
- 9 CHAPEL
- 10 FOURTH GRADE BUILDING

- FUTURE EXPANSION
- EXISTING CONSTRUCTION





the school's administration value. School-wide gatherings are also possible in the outdoor courtyard classroom and its adjacent green spaces.

Another priority for the middle school was visibility. "One thing we know about middle-school students is that we always want to be able to see them," Nazro says. To that end, centrally located faculty offices have windows out into the halls, and sight lines were carefully managed and maintained both throughout the building and from indoors to outdoors.

Fifteen years into STG's master plan, which took the school's need for a place to gather as its organizing concept, the new middle school realizes the plan's penultimate phase. An early and important decision, Susman says, was to restrict construction from the center of the campus to preserve an inviting, open green space that serves as the school's heart and around which everything else is ordered. With that as a starting point, the next priority was creation of an indoor space where all the school's students could meet. That space was Crusader Hall, the school's primary gymnasium and the first of the STG-designed buildings. After that came a music room and fourth-grade building, and then, in 2002, a new library and bell tower at the southeast corner of the playing field that anchors the campus. Last November, the school broke ground on the final step in realizing STG's unfolding vision—Nazro Hall, which will house another gymnasium, classroom and meeting spaces, and a commercial kitchen. When that building is complete, the community green will be enclosed, Susman says, and he and STG can move on to the work that remains to be done on the upper school campus at the western edge of Austin. ■

Susan Williamson is a former editor of *Texas Architect*.

The courtyard serves as an outdoor classroom as well as an assembly area for the entire middle school. Abundant windows allow faculty to easily monitor indoor and outdoor activities.

RESOURCES SITE, STREET, AND MALL FURNISHINGS (BENCHES): Acme Brick; CONCRETE MATERIALS: Transit Mix; PRECAST ARCHITECTURAL CONCRETE: United Cast Stone; MASONRY VENEER ASSEMBLIES: Salado Quarry; METAL DECKING: Dennis Steel; ARCHITECTURAL METAL WORK: Dennis Steel; RAILINGS AND HANDRAILS: Dennis Steel; ARCHITECTURAL WOODWORK: Hallmark Casework; SOLID POLYMER FABRICATIONS: Hallmark Casework; WATERPROOFING AND DAMPPROOFING: Grace Construction Products; WATER REPELLANTS: Chemprobe Technology; EXTERIOR INSULATION AND FINISH SYSTEMS: STO Corporation; VAPOR RETARDERS: AKROTEX; MEMBRANE ROOFING: Tamko Roofing Products; METAL ROOFING: MBCI; PREASSEMBLED METAL DOOR AND FRAME UNITS: Frameworks; WOOD AND PLASTIC DOORS AND FRAMES: Eggers Industries; ENTRANCES AND STOREFRONTS: Vistawall; METAL WINDOWS: Fleming; GLASS: Soloraban; TILE: Daltile

Fluid Transition

by MARK LAM, PHD, AIA



PROJECT University of Houston Clear Lake Student Services – Classroom Building, Clear Lake
CLIENT University of Houston System
ARCHITECT Hellmuth, Obata + Kassabaum
DESIGN TEAM Roger Soto, AIA; Dallas E. Felder; Clyde A. Twine, AIA; Jim Smith, AIA; Jody Henry, AIA; Don Smith, AIA
CONTRACTOR Lyda-Swinerton Builders
CONSULTANTS Haynes Whaley Associates (structural); Nathelyne A. Kennedy & Associates (civil); Shah Smith & Associates (MEP)
PHOTOGRAPHERS Aker/Zvonkovic; Drew Donovan

The architects split the program into two parts and imparted distinctly different textural qualities to both of the new buildings. The classroom building, shown at far left, modulates the transition from the campus' box-like structures. The transition culminates with the student services wing, shown at far right, that is expected to change the character of the campus.

WHEN the University of Houston commissioned HOK Architects to design a new student services building, the campus lacked a clearly defined organizational concept and was more of a loose conglomeration of disparate buildings without a clear master plan. The architects' solution attempts to establish an order by continuing the use of the form, materials, and rhythm of the neighboring Miesian-style Bayou Building while also introducing a fresher, more visually appealing character. By this approach, the design concept became one of juxtaposition and transition.

The program was divided into two parts. The classroom building required spaces for classrooms, faculty offices, student registration, student counseling, career counseling, and recreational and fitness area. Then the student services building required dining facilities, an outside café, offices, meeting rooms for various student run organizations, a student lounge, multiple labs, and additional faculty offices. Thus, the architects split the *parti* into two distinct portions – a classic box-like classroom side and a more relaxed and fluid student-services side – with both joined by a three-story atrium and lobby.

Laid out as a simple three-story block with punched windows, the classroom building's exterior combines dark-bronze-colored metal elements (wall panels, sun screens, and entry canopy) with pre-cast concrete panels integrating a primary and secondary grid. Each of its four faces responds uniquely to sun angles and adjacencies, and each exhibits handsome proportions, rhythm, and material composition. The building's location and orientation are set in perfect alignment with the west face of the adjacent Bayou Building. On the west approach this building is a complementary continuation of the Bayou Building in terms of size, shape, and massing, yet it introduces a more playful mix of grid and materials. Still, this bar-shaped building serves as a backdrop for its much more open and free-form counterpart on the east side of the complex.

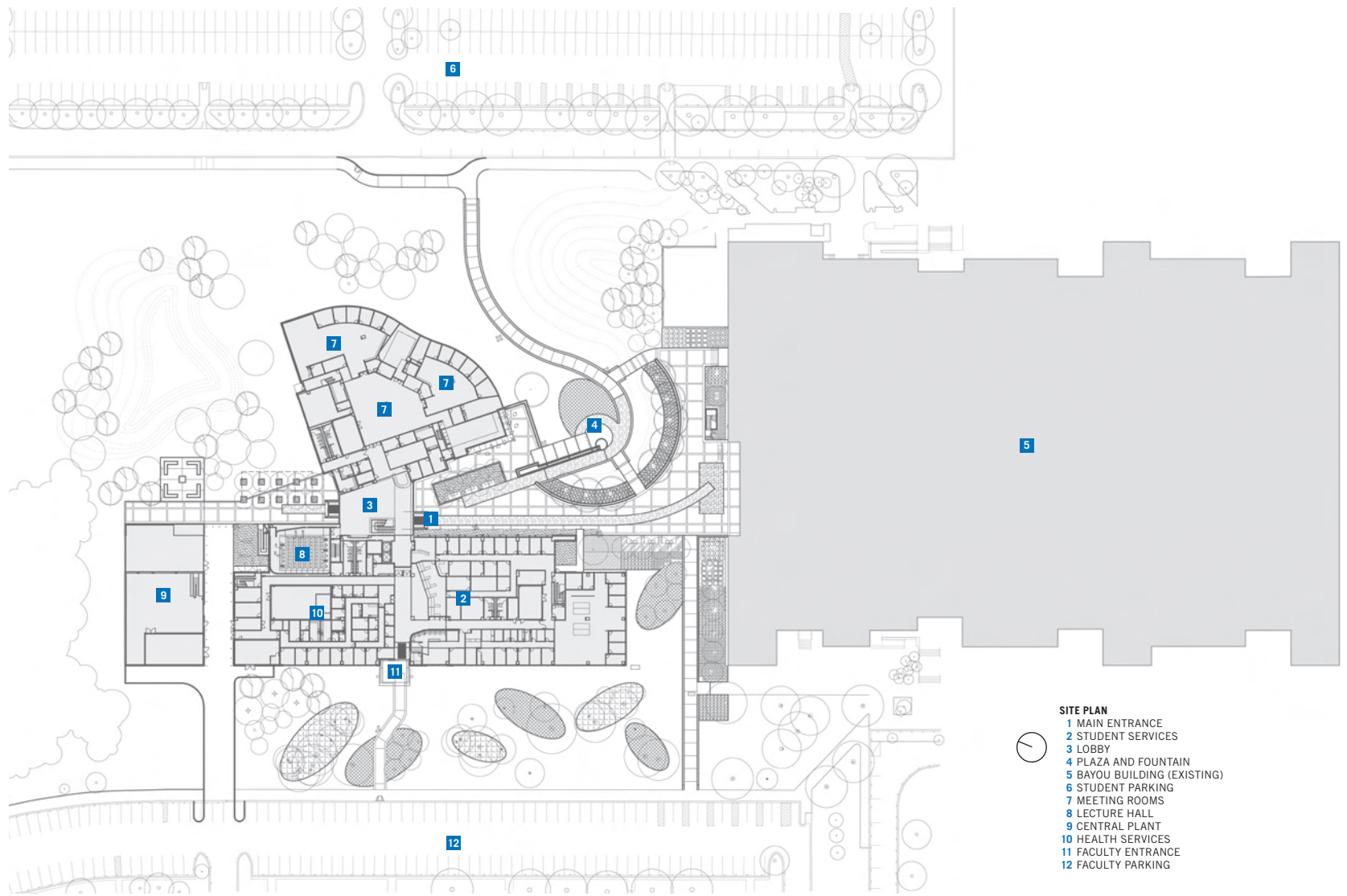


Shaped like a baby grand piano, the more delicate student services building is clad in glass curtain wall with a limited amount of dark-bronze-colored metal panels. Ceilings are tapered up to the bottom of its structure around the perimeter to maximize daylighting and to eliminate transom glass all together. Where the classroom building recalls traditional load-bearing construction with a high ratio of wall to glass, the student services building is clearly rooted in modernism with glass as the vast majority of the skin. Set against the comparative simplicity of the classroom component, this object style building creates a highly visible and welcoming front door for the campus. With parking located to the east (along with future campus housing) of its sinuous facade, this building provides a focal point for the student services program, especially at night when indoor activities appear through glass curtainwall as if staged theatre.

Connecting the classroom and student services buildings is a transparent three-story atrium that also serves as a circulation node on the pathways leading north and south to other campus destinations. Activity inside the atrium is further charged by bridges crossing from the classroom side to the student services side at the second and third levels and a daring stair that extends out into the open space. The circulation route from the Bayou Building to the next phase of classroom buildings to the north passes through the active lobby and beneath the bridges. Naturally lit during daytime hours, the atrium features four-foot long, single-bulb fluorescent fixtures arranged in a staggered grid on the ceiling and opposing walls—an economical yet edgy lighting solution.

The student services building is rotated off axis to distinguish itself from the classroom block and to help create a small courtyard at the southern entry. The courtyard includes an open-air deck off of the student café and a water feature that reinforces the “main entry” concept. Paving patterns and planters carry through the contrast between free-form and grid. Landscaping includes very large

Naturally lit during daytime hours, the lobby features a staggered grid of off-the-shelf fluorescent light fixtures.



- SITE PLAN**
- 1 MAIN ENTRANCE
 - 2 STUDENT SERVICES
 - 3 LOBBY
 - 4 PLAZA AND FOUNTAIN
 - 5 BAYOU BUILDING (EXISTING)
 - 6 STUDENT PARKING
 - 7 MEETING ROOMS
 - 8 LECTURE HALL
 - 9 CENTRAL PLANT
 - 10 HEALTH SERVICES
 - 11 FACULTY ENTRANCE
 - 12 FACULTY PARKING

oval-shape plantings and winding, flume-like sidewalks adorned with carefully placed leaf prints. This theme continues inside with free-form shapes and grids blended throughout. Concrete floors, stained to designate primary circulation routes, feature large ovals of various sizes routed into the surface while carpet tile set on the orthogonal cover floors in classrooms and offices. Two-foot by four-foot ceiling grids installed in a half running bond pattern are interrupted by custom frosted-acrylic light fixtures hanging from the ceiling. Four cloud-shaped conference rooms that float in the middle of the student computer lab are ringed by computer workstations featuring privacy walls of stained MDF board trimmed in oak and frosted-acrylic countertops. Similar countertops at information desks are back-lit for evening use. Fabricated from the same half-inch-thick acrylic as the countertops but shaped as a gentle upward curve, the acrylic tops and light fixtures represent a bending of planes that occurs at several ceiling-to-wall, wall-to-wall, or wall-to-bench locations such as the auditorium, atrium, and elevator lobby.

The architects at HOK have skillfully taken the first step to establish a sense of continuity on the Clear Lake campus while simultaneously breaking away from a rigid order and introducing a fresh, more flowing approach to the design of the new Student Services Building. Successful in several ways, this transitional piece sets the stage for the next generation of building on the campus, appropriately focuses attention on the Student Services Center, and adds to the campus a visually appealing building that students undoubtedly welcome. **T**

Mark Lam, PhD, AIA, is a senior vice president with the SHW Group in Houston.



(above) Curved perimeter walls of the student services wing and its abundance of glass combine to create dramatic interior spaces. (left) The café provides outdoor seating.

RESOURCES UNIT PAVERS: Pavestone; STONE PAVERS: Alamo Stone; PRECAST ARCHITECTURAL CONCRETE: Coreslab; ARCHITECTURAL WOODWORK: Fish Construction; COMPOSITE WALL PANELS: Alucobond Metal Panels; GLASS: Viracon; GLAZED CURTAINWALL: Vistawall; TILE: American Olean; ACOUSTICAL CEILINGS: Celotex; WOOD CEILINGS: Ceilings Plus; ACOUSTICAL WALL TREATMENTS: Ceilings Plus

'Community' College

by CHRIS SCHULTZ, AIA



PROJECT Northeast Lakeview College, Live Oak and Universal City

CLIENT Alamo Community College District

ARCHITECTS Ford Powell & Carson Architects and Planners; Overland Partners Architects

DESIGN TEAM Boone Powell, FAIA; John Mize, AIA; Jay Loudon; Tim Blonkvist, FAIA; Rick Archer, FAIA; Steve Kline

CONSULTANTS The Office of James Burnett Landscape Architecture (landscape); Goetting & Associates (MEP); CNG Engineering (electrical); Facilities Programming & Consulting (programming); Pape-Dawson (civil); CF Zavala Group (landscape); Fernandez, Frazer, White & Associates (civil); Datum Gojer Engineers (structural); Datacom Design Group (data/telecommunications); Project Cost Resources (cost estimating); fd2s (environmental graphics); Droll Worldwide Security (physical security)

ILLUSTRATOR Jim Arp

Dominating the main entrance is a clock tower, a prominent visual marker that orients people to the central plaza. The plan of the new campus illustrates its provenance in Italian hilltop communities.

THE far northeastern section of metropolitan San Antonio is an amalgam of urbanizing late 19th Century farming communities and 20th Century bedroom suburbs extending in patchwork patterns of roofs, fields, and retail strip centers. For what it has in sheer volume of construction, the area generally lacks any cohesive center. Into this void has stepped the Alamo Community College District (ACCD) with a plan to create an entirely new joint-use facility—the Northeast Lakeview College. Not only is the institution to serve the educational and training needs of an estimated 15,000 students from the nine-community catchment area, but just as importantly, the facilities are to provide the surrounding areas with much-needed community resources.

Though the need was identified as early as the mid-1990s, only after area voters approved a \$450 million bond package in 2005 has Northeast Lakeview College begun to take shape. In preparation for the vote, ACCD hired a team to begin planning the new campus. The team was headed by associated architects Ford, Powell & Carson Architects & Planners and Overland Partners Architects. Located near the bustling intersection of Interstate 35 and Loop 1604 and fortuitously sited adjacent to an existing public park with a small lake, the team developed a plan that adeptly integrates the site's amenities, topography, and natural drainage features to create what might best be termed an academic village. It skillfully combines both the conceptual organization of an Italian hill town and the formal open-space planning of traditional collegiate campuses.

Clustered near the center of the site, the V-shaped complex of buildings is focused around a plaza, reminiscent of the central piazza of the Italian model. And like its Old World precedent, this central gathering area is home to the most communal buildings—the library and learning resources center, the performing arts complex, the student commons, and student services building—almost all of which are intended for joint use by the academic and surrounding communities. By interweaving these buildings around the plaza, the designers, at the request of the ACCD administrators, inten-



(this page) As envisioned by the design team, an overlook extends out from the central plaza to connect the heart of the collegiate village to the campus green. (opposite page) The paved plaza's urban atmosphere contrasts with the casual character of the campus green and the so-called 'academic street.'

tionally have sought to enable interaction between students and the visiting community. Anchoring the plaza, a clock tower (planned as part of the library) provides a strong vertical element in what is an overwhelmingly horizontal suburban environment, much as the campanile of the Italian church or government building claimed the town's civic heart.

This clock tower also provides a constant visual marker for the series of formal open spaces that unfold from northeast to southwest. An oval parking and drop-off area begins this sequence and is itself a larger scale quotation of the main entry traffic circle (read: oval). This vehicular/pedestrian space flows into the central plaza via an allée of trees on axis with the court and open spaces beyond. Passing through the central plaza, students will emerge to a sweeping overlook around an oval green, embraced by the spreading wings of additional academic and service buildings. Again on axis, this formal lawn merges with a more informal field, in the tradition of Frederick Law Olmsted's great civic landscapes. Near its southwestern edge, a constant-level pond, part of the site's storm drainage system, focuses the eye before the vista opens to the existing lake beyond.

This formal spatial spine is balanced elsewhere in the plan with smaller, more casual sequences, primary among them an "academic street" that extends westward from the library to a linear collection of academic and career/technology buildings. Unlike the heavily urban character of the central plaza, this "street" is an informal series of connected paths, breakout areas for small group discussions, shady nooks, and informal building massing. This informality is ideally suited to the expansion needs of this area of the campus, allowing for organic growth over time. Fingers of landscaping extend up into adjacent parking areas, down toward either the green or the field, or out into a series of trails exploring purposefully undeveloped sections of the campus bordering existing park lands. Key to the unity of composition and function, the "street" continues through the interior of the library, thus tying the academic areas directly to the main plaza beyond, enlivening both.

The southerly grouping of buildings is composed of the science labs with the adjacent physical plant as well as a wellness center. Located near the center of the campus for use by students and faculty, this wellness center also is strategically located near the main site entrance for ease of use by the surrounding neighborhood. The wellness center is at the head of a series of multipurpose playing fields, tennis courts, and softball diamonds cleverly fitted around the topographic bulk of the flood control dam impounding the lake's waters. Parking for the neighborhood is also conveniently placed along the site's perimeter nearest the community, indicative of the design team's thoughtful zoning of the entire property.



Site development has effectively buffered parking from the surrounding community by a layering of vegetation and a ring boulevard, helping both to screen the large parking requirements of this commuter campus and to distribute traffic efficiently. Interiors of the lots also are softened by use of vegetative swales and tree-studded islands, though perhaps more informal geometries might have reflected the relaxed massing of the adjacent academic wing. The main vehicular drop-off and public entrance, located on the northwest side of the plaza between the library and performing arts center, does seem a bit remote from the main site entrance and at the end of a rather circuitous roadway. One wonders if this entrance could not have been combined with the strong axial sequence of public spaces described earlier, though planned modifications to the adjacent expressway on-off ramps restricted the design team's options for traffic flow. These future infrastructure improvements along with evolving developments for outparcels may yet allow the design team to create stronger entries and connections. Still, the master plan clearly recognizes the need for grand architectural gestures at the main plaza entrance, and it will be interesting to observe its development.

While the master plan will be implemented in phases as student populations increase and needs are assessed, the general zoning of the project, its utility systems, roadways, and other infrastructure allow for both ease in expansion and inevitable changes as the campus evolves. The first phase of construction, currently being designed to accommodate 8,000 students, will consist of the core elements of the campus, many of which are joint use. By allowing and encouraging this interplay between the academy and the neighborhood from its very inception, the Northeast Lakeview College promises to expand the notion of how a community college can become a catalyst for change and improvement in the quality of life for its students and neighbors. **T**



Chris Schultz, AIA, practices with Sprinkle Robey Architects in San Antonio.

Notes from the TASA/TASB Jury

A 2006 architect juror explains the process and offers some suggestions

by Lee Burch, AIA

Each year the Texas Association of School Administrators and the Texas Association of School Boards (TASA/TASB) sponsors a jury competition to select projects for its Exhibit of School Architecture. For an architect such as me to be invited to participate on the jury, the event offers an opportunity to see what's new, to see how the design of schools facilities has progressed, and to check up on the competition.

The staffs of TASA and TASB are extremely efficient in putting together the program, making the jury experience as painless and enjoyable as possible. A couple of weeks before the jury members meets, CDs and documentation are shipped to each juror. Reviewing the entries requires a substantial time commitment to do the job thoroughly. Jurors are asked to review each entry with an eye toward the five categories for evaluation—value, process of planning, design, educational appropriateness, and innovation.

For those submitting projects, I have some suggestions. First, realize that your project is one of many, so be succinct and keep it simple. Remember that just because PowerPoint allows you to add animation and exploding graphics, jurors become numb to the digital pyrotechnics after a while. Also, ditch the black background and enlarge the font size.

As for the accompanying descriptive text, architects often write like they design. Text can be unnecessarily complex, similar to the addition of some

soaring, eye-catching feature meant to obscure otherwise undistinguished design. Such phrases as “innovative,” “cutting edge,” and others abounded in the descriptions, and in a few instances those modifiers were appropriate. But it eventually becomes obvious when things are stretched a bit.

The group that gathered last August in Austin consisted of two architects, two school administrators, and two school board members. Jury members come from around the state and each brings a very different frame of reference. It's always interesting to see what kinds of things reveal themselves during the process.

The architects, I think, graded a bit more broadly than the other jurors. Our scores ranged across the spectrum, from “minimal” to “outstanding,” while the others' default response seemed to be “above average.” But they apparently didn't worry about their design ethic; they just knew what they liked and readily realized when they were impressed by a school building.

This jury process resulted in deserved recognition for some very good planning, design, and construction efforts. As designers, we can always learn something from studying the creation of spaces and places. We learn from each other and we borrow from each other to make good buildings for our clients.

Lee Burch, AIA, leads the education practice division of Parsons-3D/T in Houston.

The following six projects were recognized as exemplary in three or more (including the design category) of the six criteria in the 2006 Exhibit of School Architecture co-sponsored by Texas Association of School Administrators and the Texas Association of School Boards. Access a complete list of entries at www.tasa.tasb.org/documents/2006_Arch_Awards_FINAL.pdf.

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CONTINUING EDUCATION AIA

Mark Twain Elementary



PROJECT Mark Twain Elementary School, Houston

CLIENT Houston ISD

ARCHITECT Courtney Harper + Partners

CONTRACTOR Satterfield & Pontikes

CONSULTANTS Matrix Structural Engineers (structural); Henderson Engineers (MEP); Kuo & Associates (civil); Kudela & Weinheimer (landscape); Price Consulting (roofing); Frank Clements & Associates (food service)

PHOTOGRAPHER Hester + Hardaway

Build as a replacement for the original school, the new 86,150-sf Mark Twain Elementary School continues to support its long-established philosophy toward education: focus on each child's experience while celebrating all aspects of learning. The layout of the building evolved during planning sessions with the school community and neighborhood. Twain's enrichment programs are linked together in a prominent curved form that comprises the front elevation of the building. This form is expressed through both the exterior and the interior of the school to highlight these programs. The Literary Development Center is located at the heart of the school. Classroom wings are accessed from a light-filled primary corridor with areas for informal instruction and break-out groups. Classrooms

are stacked in a two-story configuration with kindergarten, first grade, and second grade on the first floor and grades third through fifth on the second floor. The cafeteria and multipurpose room open directly onto the covered play pavilion and are accessible from all instructional areas. The pavilion is extensively used by the school for both recreation and academic programs and by the neighborhood for community celebrations.

ANDI BEIERMAN

RESOURCES CONCRETE PAVEMENT: Southern Star Concrete; CONCRETE MATERIALS: Southern Star Concrete; MASONRY UNITS: Pacific Clay, Summit Brick & Tile; CAST STONE: Cast Stone Industries; GLAZED MASONRY UNITS: Elgin-Butler; METAL MATERIALS: United Structures of America; ARCHITECTURAL WOODWORK: South Texas Woodmill; WATERPROOFING AND DAMPPROOFING: Sonneborn, Hydrocide Dampproofing; WALL PANELS: Berridge Manufacturing; MEMBRANE ROOFING: Firestone; FASCIA AND SOFFIT PANELS: Berridge Manufacturing; METAL DOORS AND FRAMES: CECO; WOOD AND PLASTIC DOORS AND FRAMES: VT Industries; ENTRANCES AND STOREFRONTS: Vistawall; METAL WINDOWS: Vistawall; UNIT SKYLIGHTS: Major Industries; GLAZED CURTAINWALL: Vistawall; TILE: Daltile, Interceramic; TERRAZZO: Southern Tile & Terrazzo; ACOUSTICAL CEILINGS: Armstrong; DECORATIVE FINISHES: Duroplex; VCT: Tarkett Commercial; LIGHT FIXTURES: Cooper Lighting, Delray, Allscape, Alko, Luminis



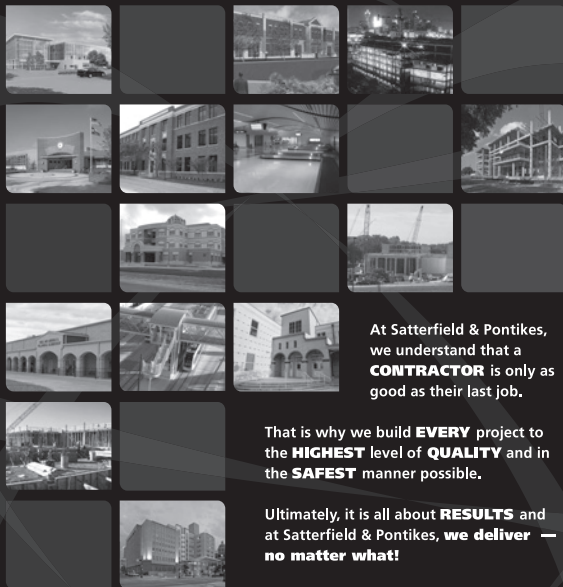
GROUND FLOOR PLAN

- 1 ADMINISTRATION
- 2 LEARNING RESOURCE CENTER
- 3 CAFETERIA/MULTIPURPOSE ROOM
- 4 MUSIC
- 5 KINDERGARTEN
- 6 CLASSROOMS
- 7 ENRICHMENT CLASSROOMS
- 8 ART STUDIO
- 9 SCIENCE CLASSROOM
- 10 COVERED PLAY PAVILION

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Gloria Cisneros Pre-Kindergarten



PROJECT Gloria Cisneros Pre-Kindergarten, Garland

CLIENT Garland ISD

ARCHITECT SHW Group

CONTRACTOR Hisaw & Associates

CONSULTANTS RLK Engineering (civil); Estes, McClure & Associates (MEP); Grubbs Ramsey (landscape); SHW Group (structure); H.G. Rice and Company (food service)

PHOTOGRAPHER Mark Trew

Gloria Cisneros Pre-Kindergarten received the Caudill Award, the highest honor given in the 2006 TASA/TASB Exhibit of School Architecture. Designed specifically with four-year-old students in mind, the 45,793-sf school provides an environment that encourages children to feel welcome. Through the use of shape, color, and material, as well as pre-K appropriate doors, windows, and furnishings, the school is playful, not intimidating. The intimate schoolhouse facade is achieved through materials, color, and a sloping roof. Canopy columns at the front emulate children with their arms stretched toward the sky. On the inside, numbers, letters, and colors are used for way-finding throughout the school. Corridor ceilings follow the slope of the letter designated to each hallway: peaked for the "A," coved for the "B," and rounded for the "C." Over-

sized numbers, color-coded appropriately for the corridor, label each classroom door. In the library, imagination is set free with bright colors of glass and uplifting ceiling treatments. Classrooms are paired to encourage team teaching and enable shared wet activities, while four computers per classroom introduce technology as a teaching tool. A large indoor playroom and adjacent covered patio take the place of a gym, supporting supervised motor-skill development. The playground is wrapped on three sides by the building for added security and easy supervision. The 5.65-acre site plan includes other safety features such as multiple loading and unloading areas and a fenced waiting area bordered by a protected walkway in the front. Ample seating and safe access to the school's dining and auditorium area accommodate community-centered programs.

ANDI BEIERMAN

RESOURCES UNIT MASONRY WALL ASSEMBLIES: Acme Brick; ARCHITECTURAL WOODWORK AND MANUFACTURED CASEWORK: Terrill Manufacturing; LAMINATES: Wilsonart; PLASTIC FABRICATIONS: Sanymetal; VAPOR RETARDERS: DuPont™ Tyvek® (Weatherization Partners); SHINGLES: GAF; ENTRANCES AND STOREFRONTS: Vistawall; GLASS: PPG



GROUND FLOOR PLAN

- 1 CLASSROOM
- 2 FLEXIBLE TEACHING SPACE
- 3 ADMINISTRATION
- 4 LIBRARY
- 5 PLAYROOM
- 6 CAFETERIA
- 7 KITCHEN
- 8 PLAYGROUND
- 9 WAITING/PLAY AREA

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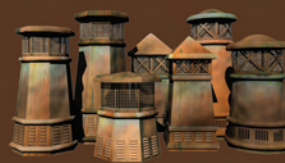
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Bridgeport Elementary School



PROJECT Bridgeport Elementary, Bridgeport

CLIENT Bridgeport ISD

ARCHITECT Claycomb Associates Architects

CONSTRUCTION MANAGER Baker Construction Co.

CONSULTANTS Basharkhah Engineers (MEP); Hart Gaugler and Associates (structural); DWA Engineers (civil); Ackerman Barnes (kitchen)

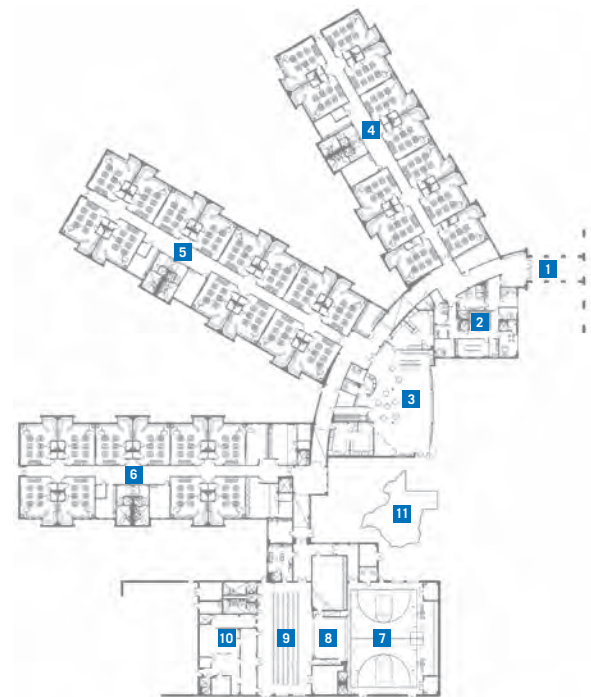
PHOTOGRAPHER Kevin Smith, AIA

Bridgeport Elementary was designed with the idea of creating a facility where the school itself could become a tool for learning. The 84,000-sf, \$10.5 million school embraces the theme of "Texas Tradition" and emphasizes the history of Bridgeport, the surrounding community, and the flora and fauna of Texas. Colorful interactive displays line the corridors and connecting spaces to provide learning opportunities for children as they walk from their classrooms. A state of Texas tricycle map helps kids identify concepts taught in the commons areas while working on the development of motor skills. Classrooms are arranged in pods by grade level and are separated from public spaces. They are equipped with computer stations, teacher's work rooms, and storage and resource rooms. This design is expandable without disrupting the function of the school, and it accommodates multiple teaching methods. The classrooms were configured by the teachers and tailored to each grade level. The architectural team consulted the community in an effort to lessen the impact

on adjacent neighborhoods during and after construction. The residential setting provides a quiet campus where teachers can employ the outdoors as a learning environment. Glazed brick with bright colors and accent patterns were used on the exterior to make the atmosphere fun and inviting, and playful elevations mimic the housing shapes of the neighborhood. Insulated skylights and clerestory in the commons areas enhance the educational experience while providing healthy natural light.

ANDI BEIERMAN

RESOURCES CONCRETE PAVEMENT: Sandy Hill Redi Mix; ATHLETIC AND RECREATIONAL SURFACING: Saf Deck; FENCES, GATES, AND HARDWARE: Merchants Metals; MASONRY UNITS: Acme Brick; CAST STONE: Better Cast Stone; GLAZED MASONRY UNITS: Acme Brick; WATER REPELLANTS: Rainbloc; ROOF AND DECK INSULATION: Firestone; VAPOR RETARDERS: DuPont™ Tyvek® (Weatherization Partners); MEMBRANE ROOFING: Firestone; FASCIA AND SOFFIT PANELS: Petersen Aluminum; SPECIALTY DOORS: Modernfold Door; ENTRANCES AND STOREFRONTS: United States Aluminum; GLASS: PPG; CURTAINWALL: Kalwall; TILE: Daltile; ACOUSTICAL CEILINGS: USG; ATHLETIC SURFACING (INDOOR): Dynamic Floors; SIGNAGE AND GRAPHICS: ARK Ramos; PROTECTIVE COVERS: American Walkway Covers; EXTERIOR SUN CONTROL DEVICES: Construction Specialties; INTERIOR GRAPHIC DISPLAYS: Museum Arts

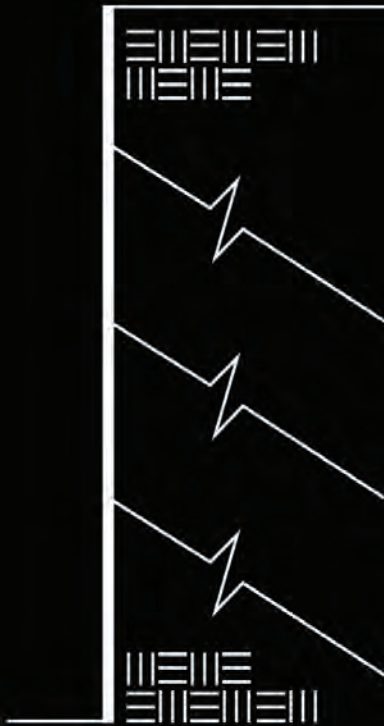


GROUND FLOOR PLAN

- 1 MAIN ENTRANCE
- 2 ADMINISTRATION
- 3 MEDIA CENTER
- 4 2ND GRADE WING
- 5 1ST GRADE WING
- 6 PRE-K & KINDERGARTEN WING
- 7 GYMNASIUM
- 8 STAGE
- 9 DINING
- 10 KITCHEN
- 11 OUTDOOR PLAY AREA

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Walker Creek Elementary



PROJECT Walker Creek Elementary School, North Richland Hills
CLIENT Birdville ISD
ARCHITECT HKS Architects
CONTRACTOR Key Construction
CONSULTANTS Don Penn Consulting Engineers (MEP); HKS Structural (structural); Schrickel Rollins & Associates (landscape/civil)
PHOTOGRAPHER Blake Marvin

Located in the North Richland Hills area of Dallas, Walker Creek Elementary embraces a new school design concept that integrates surrounding residential and urban environments. Built on 10.5 acres bordered by Parker, Simmons, and Bridge streets, the school serves 680 students in pre-kindergarten through fifth grade. The project is part of a new urban community called "Hometown" that includes residential and retail development. Due to the semi-urban setting and the building's required location at the corner of the site, HKS' designers had to rethink the typical elementary school layout. To meet this challenge, a landscaped walkway along the building's L-shaped configuration creates an urban edge to the site and a protected, landscaped green space inside the campus provides open and inviting areas for students and staff. The plan includes a two-story classroom wing along Bridge Street and a one-story wing along Parker. The classroom wing is arranged in flexible pods that serve as schools within a school. Each pod has

public and semi-private teaming areas promoting group activities and student collaboration on projects. The teaming areas have a direct connection to each classroom and covered outdoor instructional areas. Flexible classroom spaces, shared between the various pods, also are designed to change over time. The parent pick-up/drop-off and playground areas co-exist through the use of a common space called "the patio." Early in the morning and late in the afternoon, the space hosts vehicular traffic. Between these times, the area is gated and secured for playground activities.

ANDI BEIERMAN

RESOURCES CONCRETE MATERIALS: Southern Star Concrete; MASONRY UNITS: Acme Brick, Featherlite; CAST STONE: Advanced Cast Stone; MASONRY VENEER ASSEMBLIES: Acme Brick; ROOF AND WALL PANELS: Berridge; METAL ROOFING: Berridge; FASCIA AND SOFFIT PANELS: Berridge; MEMBRANE ROOFING: Firestone; ENTRANCES AND STOREFRONTS: United States Aluminum; TILE: Daltile; VINYL FLOORING: Armstrong



SITE PLAN

- 1 VISITOR PARKING
- 2 2ND GRADE
- 3 1ST GRADE
- 4 KINDERGARTEN
- 5 LIBRARY
- 6 FRONT ENTRANCE
- 7 ADMINISTRATION
- 8 ACTIVITY ROOM
- 9 CAFETORIUM
- 10 SERVICE YARD
- 11 FACULTY PARKING
- 12 ARBOR
- 13 PLAYGROUND
- 14 'THE PATIO'

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Richard A. Cook and Robert F. Fox, Jr., partners of Cook+Fox Architects, on the site of the Bank of America Tower at One Bryant Park, developed by Bank of America and The Durst Organization.



Karen Wagner High School



PROJECT Karen Wagner High School, San Antonio

CLIENT Judson ISD

ARCHITECT PBK

CONTRACTOR Joeris General Contractors

CONSULTANTS Reynolds-Schlattner-Chetter-Roll (structural); Goetting & Associates (MEP); Robert Simpson & Associates (food service); BAi (acoustics); Gould Evans Associates (landscape)

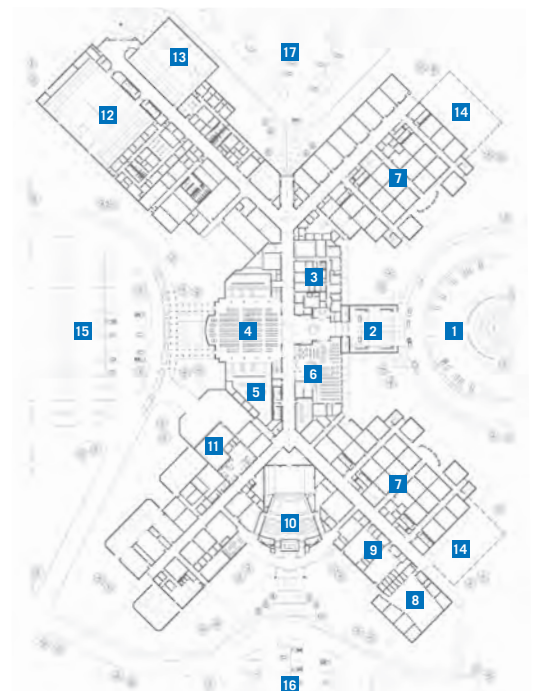
PHOTOGRAPHER Jud Haggard

Completed in August 2005, Karen Wagner High School is located on a 100-acre hilltop overlooking San Antonio's downtown skyline. The footprint features a formation of two Y's placed end-to-end. This design compresses the 399,949-sf building while allowing the maximum amount of natural light to permeate the interior. Windows line the corridors, affording views to the outdoors and providing a sense of orientation and direction within the building. Two secondary corridors bisect the main mall in either direction, and tertiary corridors help in the daily movement and security of students. Security is easily maintained by placing administrators at the various intersections. All stairwells either open to the corridors or have windows to the exterior as an added measure of security. PBK designed the school to reflect a collegiate atmosphere that would encourage a sense of pride in students, faculty, administrators, and the community of Judson ISD. The building's interior reinforces this atmosphere through the use of subtle and elegant colors, materials, and finishes. The design also incorporates native materials such as lightly

colored limestone and brick, contributing to the school's local character. The school's interior spaces maintain a level of separation between upper and lower-level classmates. Grade levels are grouped in different classroom areas, but students interact in common spaces such as the library, athletics, and the fine arts wing. The building's entry is oriented to align with the 1968 Hemis Fair's Tower of the Americas in downtown San Antonio.

ANDI BEIERMAN

RESOURCES CONCRETE PAVEMENT: Pavestone; UNIT PAVERS: Pavestone; ATHLETIC AND RECREATIONAL SURFACING: Plexipave; FENCES, GATES, AND HARDWARE: Aztec Ornamental; PRECAST AUTOCLAVED AERATED CONCRETE WALL AND ROOF PANELS: Tectum; PRECAST ARCHITECTURAL CONCRETE: Interceramic; MASONRY UNITS: Elgin-Butler Brick; LIMESTONE: Interceramic; CAST STONE: Texas Quarries; METAL MATERIALS: Aurora; METAL DECKING: Consolidated Systems; ROOF AND DECK INSULATION: Tectum; MEMBRANE ROOFING: Soprema; METAL ROOFING: Berridge Manufacturing; SPECIALTY DOORS: The Cornell Iron Works; UNIT SKYLIGHTS: Skywall Translucent; STRUCTURAL GLASS CURTAINWALL: Vistawall, AFG; TILE: Interceramic; ATHLETIC WOOD FLOORING: Action Floor Systems; WALL COVERINGS: Kenmark; ACOUSTICAL TREATMENTS: Tectum; OPERABLE PARTITIONS: Hufcor



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West Columbia Elementary



PROJECT West Columbia Elementary, West Columbia

CLIENT Columbia-Brazoria ISD

ARCHITECT SHW Group

CONTRACTOR Tellepsen Builders

CONSULTANTS DBR Engineering Consultants (MEP); Brooks & Sparks (civil); Haynes Whaley Associates (structural); Millunzi and Associates (food services)

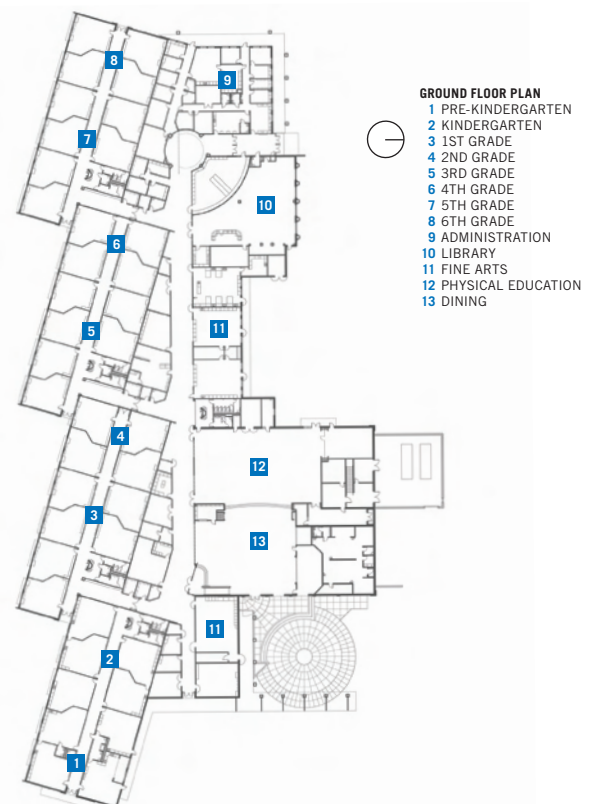
PHOTOGRAPHER Richard Payne, FAIA

Completed in September 2005, West Columbia Elementary is the realization of a vision to create a dramatically different learning environment for students. By combining the existing K-4 facility and the fifth and sixth grade facility, the architects created a 95,584-sf campus that promotes interest and creativity. Classroom pods are uniquely designed to offer swing space for changing class needs. Wood, bright colors, and natural light stimulate students and encourage learning. Beyond the classroom settings, the entire facility is designed to serve as a learning tool. Corridors become extensions of classrooms, with geometrical floor patterns, time-line graphics, maps, and display space. Tile patterns in the hallways are configured to teach mathematical concepts, such as simple counting blocks in the lower grade level pods and more complex patterns in the upper grade level pods. Areas of the building are left exposed to enable the students to see how the internal mechanisms of the building operate (fire main, HVAC, mechanical, struc-

tural). The key feature of this project is a working sundial in the main foyer, which keeps time accurately because the design team calculated the longitude and latitude of the site. Depending on the season, light and shadows are projected through the glass panels in the school's tower that students can interpret to tell the time. A science lab and two fine-arts classrooms open onto an outdoor space that provides an indoor/outdoor feel to instructional areas. A cistern captures rainwater from the roof to provide a water source for science classes.

ANDI BEIERMAN

RESOURCES FENCES: Merchants Metals; PRECAST ARCHITECTURAL CONCRETE: Shepler's (Tilt Panel); CEMENTITIOUS DECKS: Tectum; CAST STONE: Star Medallion; UNIT MASONRY WALL ASSEMBLIES: Eagle-Cordell Concrete Products; MASONRY VENEER ASSEMBLIES: Acme Brick and Elgin-Butler (blend); EXTERIOR INSULATION AND FINISH SYSTEMS: Dow Building Materials; ROOF AND WALL PANELS: Millennium Building Components; MEMBRANE ROOFING: Flex Thermo; SPECIALTY DOORS: The Cookson Company; ENTRANCES AND STOREFRONTS: United States Aluminum; UNIT SKYLIGHTS: Major Industries- (translucent panel); GLASS: Oldcastle Glass; TILE: Daltile; SPECIAL CEILING SURFACES: USG Interiors; ATHLETIC SURFACING (INDOOR): Sport Court (Mondo USA, dist.); LAMINATE FLOORING: Armstrong; ACOUSTICAL WALL TREATMENTS: Tectum; QUARRY TILE: American Olean





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budget for each of the 16 schools ranged from \$10 million to \$12.6 million, depending on site conditions and year of completion.

The program for the four middle schools (grades 6–8) centered on team-teaching with a focus on project-based interdisciplinary curriculum. The core academic areas comprised a single grade divided into three teams, each team consisting of three core classrooms and a science classroom. A total of 36 core classrooms were programmed for each middle school, with a program area – including a media center, visual and performing arts, instructional technology, career education and physical education – of 179,000 gross square feet, serving a projected enrollment of 1,200. The budget for each middle school was approximately \$23 million.

The district's single new high school, by comparison, consisted of 46 core classrooms with a projected enrollment of 1,500 students. The 325,000-square-foot facility, which included a restaurant as part of a food-service magnet program, was built at a cost of \$49.8 million.

The district's emphasis on neighborhood schools in the 2002 bond program had multiple benefits. These schools allow many students to walk to school, thereby supporting healthy lifestyles; they nurture a strong link between the school and the larger community; and they bolster property values for homeowners in the surrounding area. By necessity, these schools were to be placed within established neighborhoods to relieve overcrowding at existing schools – some of them located only blocks away. Finding land for the 21 new school campuses, however, presented DISD administrators with several challenges. Since there was little undeveloped land in many of the neighborhoods selected for new schools, the district often resorted to the acquisition of apartment complexes in order to assemble parcels adequate in size to support a school campus. These apartments were typically identified as among the worst slums in the city, and their removal and replacement with a new school constituted a significant act of urban renewal for the surrounding community.

The district also partnered with the City of Dallas at several campuses to build joint-use facilities. New branch libraries were constructed adjacent to two elementary schools in Oak Cliff, allowing students the advantage of a much larger media center than would normally be accommodated within the school. The Arcadia Park Elementary School and Branch Library (featured on p. 26) by VAI Architects, successfully integrates the design of the two building types into a complementary ensemble of rust-, ochre-, and limestone-hued volumes that informally ramble across the edge of an escarpment, with significant views toward the downtown Dallas skyline. By contrast, the new Jimmie Tyler Brashear Elementary School and adjacent Hampton-Illinois Branch Library – both designed by RBDR Architects of Waco – possess less architectural continuity. The library dominates this pairing of civic edifices through bolder forms, colors, and materials than were employed in the design of the school.

To date, 19 schools have been built, with another three nearing completion. The best of these schools have successfully adapted DISD's prototypical educational specification into a rigorous work of architecture that endures public scrutiny—the organization of the site; the location and scale of the school building relative to the surrounding neighborhood; the hierarchy of the various program components and the straightforward expression of the constituent parts through massing, materials, and fenestration; the celebration of the entrance; and the arrangement and character of the interior spaces. All of these are essential elements that characterize and define the ultimate success of the various school projects.



Challenged by scarcity of land in a densely populated neighborhood, BRW Architects combined Tasby Middle School (above) and Lowe Elementary onto a single site.

The Jack Lowe, Sr. Elementary School and Sam Tasby Middle School illustrate this formula well. The two adjoining schools are in the Vickery Meadows neighborhood, one of the most densely populated, low-income areas in Dallas. Due to the scarcity of available land, DISD was compelled to combine the two schools onto a single, 16-acre site located only blocks away from the new Conrad High School. BRW Architects designed the two buildings to function separately, although the plans are cleverly integrated to share a common kitchen, mechanical plant, and auditorium. The buildings are pushed to the street to preserve as much of the site as possible for play areas and athletic fields. Along Fair Oaks Avenue, the southeast boundary of the site, Tasby Middle School forms a three-story "urban edge" to the cheerless neighborhood, effectively establishing the combined school complex as a catalyst for community redevelopment.

Another important catalyst project is the Hector P. Garcia Middle School, located in a decaying commercial district in north Oak Cliff. Designed by Perkins + Will and slated for completion this spring, the school is positioned at the north end of a 13-acre site set on a high promontory with panoramic views dominated by the downtown skyline. The layout of the building is a clear and enlightened expression of DISD's educational specification for middle schools. Thirty-six core classrooms are aligned along a three-story zone facing Eighth Street to the north. By attaining a height of three floors, the architects were able to conserve valuable open space for athletic fields and to create a monumental urban facade that defines a public plaza. A subtle inflection in the building plan further delineates this public space while simultaneously focusing views from the classrooms toward downtown. The classroom arrangement flexibly accommodates one grade level per floor in three teams of students, or alternatively, one team from each grade per floor. Administrative and teacher areas distributed along the east-west circulation spine foster a strong interconnection between students and adults, while promoting passive security throughout the facility. To the south of this spine are located the larger programmatic functions of the school, including the gymnasium and locker rooms, visual and performing arts spaces, an auditorium, and a cafeteria and kitchen. This layout also fosters community use after school hours. The building's main public entry faces Eighth Street and is

located between the long line of classrooms and the second-level media center, which boldly cantilevers out from a masonry base. The entrance sequence continues into a splendid two-story space, which flows through the building, providing easy access to the community-use functions and to an exterior covered veranda beyond. This grand hallway will be dominated by a mural of Hector Garcia, a decorated WWII veteran and activist for the civil rights of Mexican-Americans, who – it is envisioned – will serve as a model to the students on the methods to effect change. This school likewise has the capacity to act as a catalyst in the transformation of the surrounding north Oak Cliff community.

Construction is also in progress on another landmark project for the district—a massive expansion of the Booker T. Washington School for the Performing and Visual Arts. Located near the eastern terminus of the Dallas Arts District, the original 1922 high school building – Dallas' first African-American high school – will be renovated and expanded to 200,000 square feet in a bold and creative plan prepared by Allied Works Architecture of Portland, Oregon. When complete in 2008, this nationally renowned arts magnet school will provide over 800 students and 84 faculty with classrooms, studios for performing and visual arts, a 400-seat performance hall, and a black-box theater, in addition to other small recital and performance spaces. Each of the school's five program clusters (music, dance, theater, visual arts, and academics) will be contained within separate volumes that provide for individual identity, while simultaneously overlapping with adjacent disciplines in plan and section.

The construction budget for the arts magnet school is \$47 million, with \$15 million provided through the DISD bond program and \$22 million in contributions raised by the Booker T. Washington Advisory Board. The cooperative funding, design, and management of this project represents a groundbreaking public/private partnership for the school district.

Another signature project funded in the district's bond program is the Jesse Owens Memorial Complex, completed in 2005 at a cost of \$38.7 million. Designed by HKS Architects, the project comprises two major facilities—a 12,000-seat stadium and a 7,500-seat field house—that provide the district with the first athletic complex for varsity sports in over 35 years.



COURTESY ALLIED WORKS ARCHITECTURE

(above) Allied Works expansion of Booker T. Washington School for the Performing and Visual Arts revolves around an outdoor amphitheater. (below) Separate volumes for each of the school's five program clusters (music, dance, theater, visual arts, and academics) provide individual identity.

Through careful planning by DISD, its Bond Program Advisory Committee, and the program management consultants, the 2002 bond program has addressed many of the critical physical needs for the state's second-largest school district. However, continued growth in the district's predominantly minority enrollment – currently 63 percent Hispanic and 30 percent African-American – has compelled administrators to initiate planning for the next capital referendum, tentatively slated for late 2007 or early 2008. This program, expected to total approximately \$750 million, will provide funding for an additional eight or nine new schools.

A contributing editor of *Texas Architect*, Willis Winters, AIA, is the assistant director of planning, design, and construction for the City of Dallas Park and Recreation Department.



PHOTO BY WILLIS WINTERS, AIA



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In the hands of a talented designer, concrete can evoke a sense of timelessness and utmost simplicity. (above) The parallel concrete vaults of Louis Kahn's Kimbell Art Museum in Fort Worth illustrate the versatility of concrete as durable structure. (below) Tadao Ando drew inspiration from Kahn when designing the neighboring Modern Art Museum of Fort Worth. Ando's cast-in-place concrete imbues the museum's galleries with lustrous tactility.

Concrete is a versatile material whose aesthetic properties are often not understood. When architects think of concrete they all too often think of bland tilt-up concrete warehouses, plain concrete sidewalks, and boring structural properties. Fortunately, many architects are seeing the limitless boundaries of what concrete can do, not only structurally, but aesthetically.

Concrete, the most widely used building material in the world, has proven its sustainability and durability through two millennia of use dating back to Roman structures still in use today. The Pantheon, built in the second century A.D., is a shining example of all the positive attributes concrete brings to a project. The structural benefits, aesthetics, and durability are unquestionable. From an environmental standpoint, what can be more sustainable than to build something which has a productive life of two millennia and still counting? Countless other similar examples exist in the structures produced by the Roman Empire.



PHOTO BY JOE ANKER - AMERZ VONKOVIC PHOTOGRAPHY

"Concrete" continued on page 64

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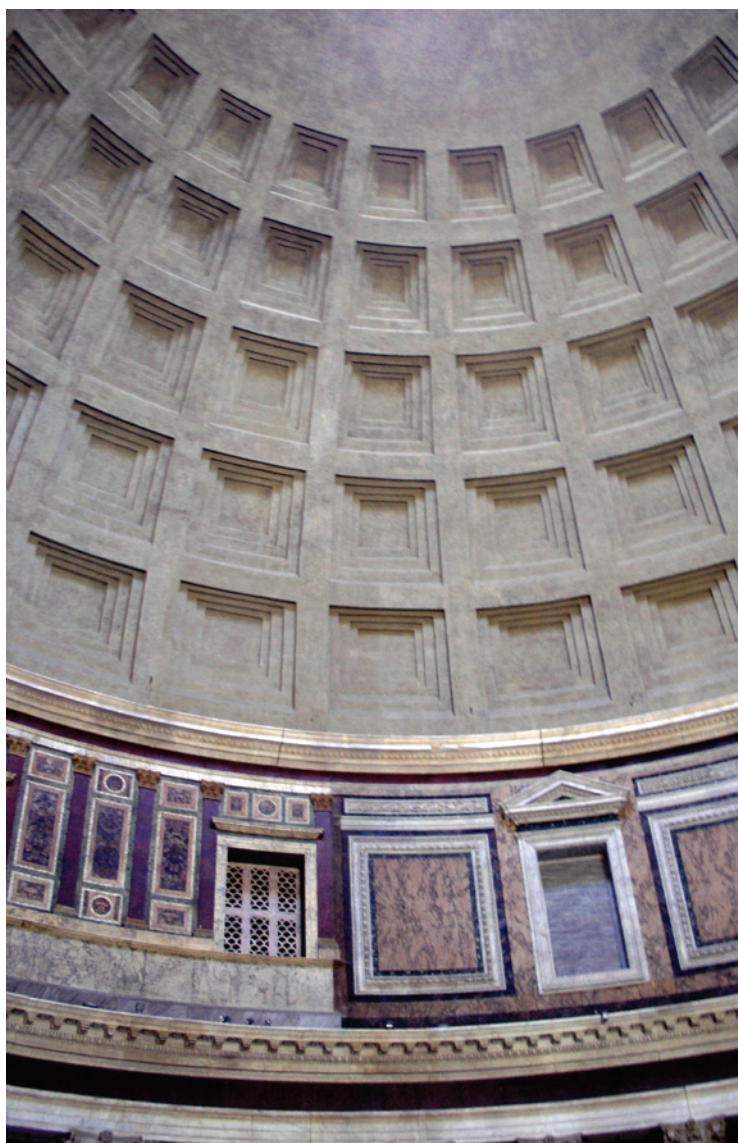
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COURTESY VANCE POOL



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Built early in the second century A.D., the Pantheon in Rome is still in use today. Coffering on the inner face of the dome, ingeniously designed by an unknown architect who capped the apex with pure space, retains its structural integrity and inspirational power. Time also seems to stand still under Kahn's barrel vaults at the Kimbell where natural light permeates the interior galleries through a series of longitudinal slits in the concrete ceiling.

"Concrete" continued from page 62

Concrete as a structural member like the dome of the Pantheon, or for columns or beams is not only commonplace, but has proven to be very cost effective. In many cases the floor-to-ceiling height of tall buildings can be reduced using post-tensioned concrete structural systems instead of steel while providing the same usable interior volume. Even structural elements can become aesthetically pleasing. One only has to look at Le Corbusier's many projects from the early twentieth century, Frank Lloyd Wright's elegant columns in the Johnson Wax building, Wright's Guggenheim, or Richard Meier's elegant concrete curves in his Jubilee Church in Rome. All of these architects used concrete in ways few, if any, before them ever had.

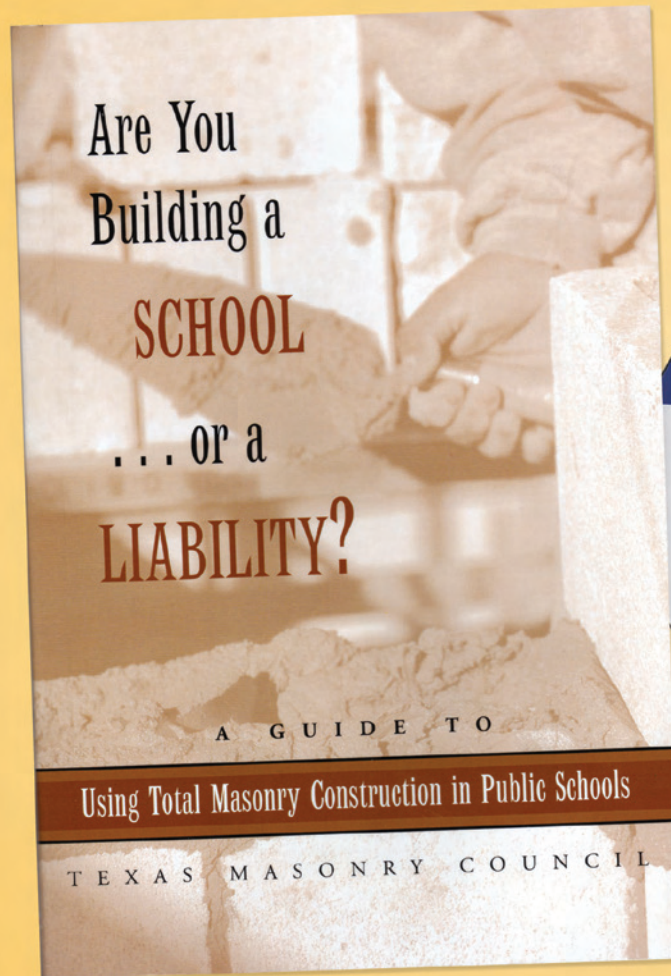
The masses of Frank Gehry's Guggenheim Museum in Bilbao, as well as some of his other designs, are garnering a lot of attention these days. There is even a TV special on the unique approach to structural engineering

that was required to develop designs and connections. This points out an inherent difference between concrete and steel. Concrete is like "liquid stone." It can be formed into any shape an architect can imagine. Bending of reinforcing steel is much simpler than the fabrication of unique steel boxes, beams, or members. When you think of arches, piano curves, or any complex shape, concrete is the easy answer.

The texture and surface characteristics of an object can make an object or building impart completely different feelings. Think of a sphere or ball. A bowling ball or marble evokes one image, a tennis ball another, and how about those little stickers you pick up on the legs of your pants when wandering through the brush. All are the basic shape of a ball and all are very different. Many of us have become familiar with this in concrete slabs, floors, and hardscaping of projects. You can diamond-grind and

"Concrete" continued on page 66

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"Concrete" continued from page 64

polish concrete to attain a glossy stone-like finish. Or, you can trowel it to attain a surface similar to a common sidewalk. There are stamps and rollers that can impart stone, brick, slate, or tile textures like almost any material previously used by man. What many designers are just now learning is that the same capabilities exist for interior or exterior wall surfaces. When Georgia Institute of Technology's College of Architecture added on to its facility in the late 1970s, the Institute required that all buildings contain a significant percentage of brick in their facades. As an addition, the designers were able to use a large amount of "bush hammered" concrete

in their new facades. Not only was this unique on campus, it was a costly process at the time. Today, a simple form liner could have been placed in the form prior to concrete placement and the same surface would be achieved. Form liners can create imitations of almost any type surface, from brick to stone. Even the tilt-up industry, long disrespected as a design choice, now has options like thin brick inlays and the creative use of stucco and insulation to make just about any type of surface treatment, both easily and inexpensively.

Color is one of the areas to have improved in the last few years. There was a time when imparting color was strictly based on the skill of the subcontractor doing the work. Consistency was not a reality. Today, many

concrete plants in Texas have integral color systems which use computers to impart specific amounts of one to four different pigment materials into concrete allowing much improved quality control over previous methods. Just look down at the floor in any recently built Wal-Mart Supercenter. The reddish brown floor in the main portion of the building is integrally colored concrete. It contains hundreds of truckloads of concrete, each batched independently, of almost exactly the same color. This same technology again is applicable to both vertical and horizontal concrete surfaces. So you could

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Concrete, when used thoughtfully as here at the Modern Art Museum of Fort Worth, can result in a visually rich and tactile surface that materializes into pure form.

PHOTO BY JOE AKER - AKER/ZONKOVIC PHOTOGRAPHY

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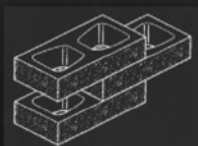


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Vance Pool is the Houston-based national resource director for the National Ready Mix Concrete Association. With more than 25 years of industry experience, he frequently speaks on topics related to concrete and the construction industry.

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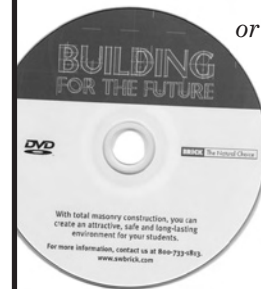
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Building a Better Wall

University of Houston architecture students face off with bricks and mortar

By Alex Lahti

What happens when you give sophomore architecture students bricks and mortar? Heroic cantilevers go out of style, and formal innovation follows from structural know-how. On Sept. 19 during the annual Brick Day, students at the University of Houston's Gerald D. Hines College of Architecture had a chance to put to use the theory they learn in lecturer Robert Morris' structures class.

Brick Day's rules are simple: each design team of graduate and undergraduate students is asked to transform 20 bricks into a section of load-bearing wall. Their success would be rated on craft ability, design, and structural appropriateness. At this event 20 teams faced off to compete for five awards—platinum, gold, silver, bronze, and zinc.

The students set forth trying to recall the difference between rowlock shiner and sailor courses, or remember why the instructor talked so much about the Monadnock Building. So, with pre-drawn plans in hand, each team of six students was given a first lesson in bricklaying. The Texas Masonry Council provided the tools and materials for the event, and the Associated Masonry Contractors of Houston provided the volunteer brick mason instructors.

Block by block, the walls began to emerge. As team members specialized — one troweling mortar, another checking the wall for plumb and level — their growing aptitude for laying brick could be read through the courses like a history, each level straighter than the next. But as the

students learned in class, a wall is only as strong as its foundation—so some teams chose to dismantle and rebuild their walls with their newly honed skills.

The designs were as varied as there were teams—some squat, some tall, some straightforward. Others might be called “deconstructivist.” A few groups dared to build corbelled arches. One team, comprised solely of female students, prided their wall's straight grout lines. Another proudly showed off their serpentine wall: “just like Thomas Jefferson's,” they said in chorus. And for the most part, the students were able to achieve their design intentions, many admitting that they would do it differently in the future. And that is exactly what Brick Day is about, giving young designers the chance to make mistakes.

Instructors at the College of Architecture have a similar attitude—learning happens best through doing. Burdette Keeland, the namesake for the college's future advanced design facility that will be a home for the growing industrial design department, is remembered for such aphorisms as “the war is on the walls.” I will never forget my second-year studio instructor's ever-present response, “Well, let's see it.” So let's put brick to mortar, and see what comes up.

Alex Lahti is a graduate student in the University of Houston's Gerald D. Hines College of Architecture.



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(above) University of Houston second-year architecture student Sonia Huda levels a brick as she and her Team 2 cohorts participate in the 'Build a Better Brick Wall Contest' held during the University of Houston's fall semester. (top right) Team 19 members Christian Hernandez, left, and Tony Torlucci apply mortar to complete their entry. (bottom right) From left to right, Amanda Hoxter, Huong Nguyen, Athena Patira, Rafael Morales, and Justin Drace of Team 9 precisely level the two types of masonry used in constructing their wall.

Excellence in Brick

Award-winning Corpus Christi school demonstrates complex but 'fun' brickwork

by Jaime Powell

In a once charming neighborhood now in desperate need of a facelift, the construction of an award-winning, new elementary school has ignited a long-awaited neighborhood revitalization.

With input from Richter Architects, the Corpus Christi Independent School District chose to build the new Oak Park Special Emphasis School campus on Leopard Street, in the heart of one of Corpus Christi's oldest and most established neighborhoods.

The Richter team went to work siting the school to create a new gateway and green space entrance into the neighborhood. The school's prime location is within easy walking distance for many of the young students in the neighborhood.

"It's not very often that you get to go back into an existing, old part of town and improve it," says firm principal Elizabeth Chu Richter, FAIA. "The investment there is really twice as much as building in a new suburb. You already have history and presence."

At a campus where more than 95 percent of the students qualify for free or reduced meals, Richter Architects was determined to create an open and dignified place for teaching and learning. Part of the philosophy was to build with materials of earth tones that would create a neutral backdrop so that student creativity such as artwork could flourish.

The D'Hanis brick chosen for the project was fundamental to the design concept. It offered a taste of Hispanic heritage in a city, with a predominantly Hispanic population and much in common with Mexico, which lies 120 miles to the south.

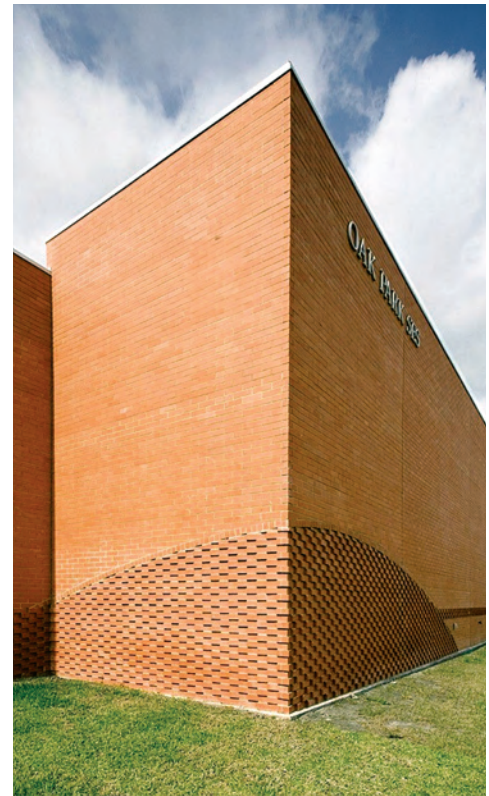
"It has a real heritage here," says Elizabeth Chu Richter. "The Hispanic heritage uses a lot of brick and terra cotta."

Elizabeth Chu Richter and David Richter, FAIA, played to the idea that the young students could appreciate the qualities of light, form, order, and genuine materials.

"Sometimes school designs can be condescending," David Richter says, explaining that Richter Architects approaches school design in



Appearing as twisting tree trunks, columns at Oak Park Elementary's entry canopy illustrate the architects' description of brick as a 'fun' and 'fluid' building material.



The 59,000-square-foot Oak Park Elementary was recognized with top honors in the 2006 Brick in Architecture awards program sponsored by the Brick Industry Association. The architects selected D'Hanis brick because the material corresponded with the Hispanic heritage of the Oak Park neighborhood in Corpus Christi.

a manner that is more respectful of the young occupants. "We think kids can appreciate sophisticated buildings." The terra cotta brick, he says, was sculpted and textured to be "fun, constructivist, and culturally reverential."

"Brick is a fun material," David Richter said. "Brick is very fluid. You don't think of it as fluid, but it is sort of small pieces that can be put together in a wide variety of ways. It can be slick and taut or gnarly and rough."

It's also functional. The coastal location of the school requires materials that can withstand hurricane-force winds. Brick offers that storm resistance as well as vandal resistance, and requires virtually no maintenance, he adds.

Entering or exiting the school, students pass under a canopy supported by metaphorical oak tree trunks, actually twisted brick columns, that are bowed concave triangles. The columns support stone arches embellished with cast letters that spell out virtues such as knowledge, creativity, discipline, character and citizenship.

Oak Park Elementary librarian Virginia Randal, who started her career at the original Oak Park school 27 years ago, says the entryway is a favorite area for the students.

"We talk about the wording up there," she

says. "When we talk about it, they appreciate it. They think it's neat the way it is built. I think the older kids understand the meaning."

Randal who photographed the construction, says she was amazed at the complexity of the brickwork. "I think it does make it different," she says, adding, "this is my pride and joy."

Oak Park Elementary received top honors in the 2006 Brick in Architecture awards program sponsored by the Brick Industry Association. The project was recognized as "Best in Class" in the educational architecture category. In the words of juror Chuck Hultstrand, AIA, Oak Park Elementary exhibits a "sculptural expression of brick that brings wonder to a child's experience of architecture." Oak Park Elementary and other winning entries are featured on BIA's Web site (www.gobrick.com). The Corpus Christi project also was featured in a special issue of *Brick In Architecture* published last fall. In addition, Oak Park Elementary and other top winners in each category also were featured in a special insert in the December 2006 edition of *Architectural Record*.

Jaime Powell is a staff reporter for the Corpus Christi Caller-Times.

PROJECT Oak Park Elementary School, Corpus Christi

CLIENT Corpus Christi Independent School District

ARCHITECT Richter Architects

DESIGN TEAM David Richter, FAIA; Elizabeth Chu Richter, FAIA; Sam Morris, AIA; Sheldon Schroeder, AIA; Stephen Cox, AIA; Lonnie Gatlin, Assoc. AIA; Maya Richter, Assoc. AIA

CONTRACTOR Don Krueger Construction

CONSULTANTS Maverick Engineering (structural); Randy Thompson (civil); Stridde, Callins & Associates (MEP); Doug Wade Landscape Architect (landscape)

PHOTOGRAPHER David Richter, FAIA; Larry Rose

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Architecture Sold, Retooled as Hanley Wood's Architect

Architect, Hanley Wood's newest launch born from *Architecture*, addresses architects and their process. The magazine aspires to build community around issues of universal concern to the profession, including technological change, social and environmental sustainability, business growth, practice management, and design, according to Editor-In-Chief Ned Cramer. Hanley Wood's parallel Web-based publication, www.architect-magazine.com, features a reader-submitted design gallery, breaking news, product resources, and continuing education. Hanley Wood purchased *Architecture* and *Architectural Lighting* from VNU Business Media, Inc. in late 2006.

Brick Industry Association Offers Technical Notes

The Brick Industry Association's *Technical Notes* feature landscape design, detailing, and construction information with guidelines on the use of clay brick in exterior projects. "Full of detailed directions, standards and recommended practices, *Technical Notes* is an excellent resource for anyone seeking to expand their knowledge base," said Dick Jennison, president and chief executive of BIA. The BIA *Technical Notes* program began in the 1960s and has grown to include nearly 100 documents. A complete review of all of the documents is currently underway, and BIA expects to publish several new *Technical Notes* for landscape architects and paving applications within the next several months. Each set of notes and guidelines has been thoroughly researched to ensure that it conforms to code-accepted practices and regulations. Information of principal interest to landscape architects includes subjects such as *Brick in Landscape Architecture and Pedestrian Applications* which describes brick paving systems used in landscape design and landscape architecture and the ways such systems relate to brick masonry. For more information on the Brick Industry Association, or to download *Technical Notes* free-of-charge, visit the BIA Web site at www.gobrick.com/pavers.



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THC Expects More Funds for Courthouse Restorations

With 35 county courthouses restored so far through the Texas Historic Courthouse Preservation Program, the Texas Historical Commission anticipates additional funding this year to restore another 20. The program serves to revitalize Texas' downtowns by sparking a resurgence in economic development and creating heritage tourism destinations. THC officials say funds are expected to be approved by the 80th Texas Legislature and possibly through the Texas Department of Transportation enhancement program. The program was announced in June 1999 and provides partial matching grants to Texas counties for the restoration of their historic county courthouses. Since its inception, the program has been awarded \$145 million in grant funds. According to THC, courthouse restorations have generated 4,692 jobs throughout Texas, more than \$130 million in local income, and more than \$177 million in gross state product. A grant from the Texas Land Title Association establishes a series of stewardship workshops that will provide individual training to ensure the structures are maintained and preserved. The program's work has garnered national and international attention, with honors from the National Trust for Historic Preservation, the Association for Preservation Technology International, and Texas Society of Architects. The most recent rededications have taken place in Wharton, Bee, Menard, Bosque and DeWitt Counties. For more information regarding the Texas Historic Courthouse Preservation Program, visit www.thc.state.tx.us.

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A Study of Place

A gift to Texas schoolchildren commemorates AIA's sesquicentennial

by DAVID RICHTER, FAIA

THIS year marks the 150th anniversary of the American Institute of Architects. AIA local chapters and regions across the nation will be celebrating the year with projects designed to



highlight the contributions of architecture to American culture, and to create lasting contributions to livable communities in America. For 2007, *Texas Architect* will mark AIA150 with a series of essays celebrating the rich diversity of Texas architecture, and contemplating the critical urban, environmental, and architectural issues facing the coming generation of Texans.

We begin the series considering architecture's relationship with the most basic obli-

tion of any civilized society—education. Every architect intuitively understands that many of the emerging issues of our era—sustainability, livable urban environments, even social justice—all require a public that understands how the qualities of place are essential elements of a culture that binds communities together and links them with past and future generations. Nations that have a tradition of good design enjoy a populace acculturated to understand and embrace this sometimes elusive truism.

Our young nation needs help in building this awareness. And in spite of Texas' frontier traditions and penchant for individualism, our state is uniquely positioned to play a leadership role nurturing a new generation of sustainability, responsible urbanism, and good design. The Texas Society of Architects, in its sponsorship of *The Shape of Texas* radio series, has created a library of more than 400 episodes featuring the famous and the obscure places from every region and every era that together create the mosaic that is Texas. These entertaining and informative episodes are about architecture and civic place. They are also about people, nature, landscape, history, technology, arts, urbanism, environment science, social science, and more.

Leveraging *The Shape of Texas* archive, *A Study of Place* will be TSA's AIA150 gift to the schoolchildren of Texas. An integrated and multi-disciplinary teaching tool, it is designed not to place new expectations on teachers, but to enrich and support the existing K-12 curricula of social studies, environmental sciences, and creative writing. It will help teachers do their job more effectively and more creatively.

And as a powerful incidental, *A Study of Place* will help children learn skills that too often elude this sensory stimulus-oriented generation—critical listening skills, visualization skills, arts and architecture appreciation, and a recognition of the importance that place plays in our culture and in our lives. It will be a both beautiful gift and a wise investment.

David Richter, FAIA, is a principal of Richter Architects in Corpus Christi.

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